

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Access DB# 88459

Requester's Full Name: Jeffrey E. Russel Examiner #: 62785 Date: 3-7-2003  
 Art Unit: 654 Phone Number 308-3975 Serial Number: 09/520,856  
 Mail Box and Bldg/Room Location: CM1-11D13/CM1 9807 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bioruptible Material Composition Adaptable To Diverse Therapeutic Indications

Inventors (please provide full names): O. Hnojewy, C. Milo, G. Cruise

Earliest Priority Filing Date: 3-7-2000

Point of Contact:  
 Mona Smith  
 Technical Information Specialist  
 CM1 9807  
 Tel: 308-3278

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, and/or patent numbers) along with the appropriate serial number.

Please search SEQ ID NO: 1 (LGPA) in STN, in the U.S. patent application sequence database (pending, published, & issued), and in Geneseq/Swissprot/PIR. Please require any hits to have 10 or fewer residues.

Thank you.

JRK

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FILE COVERS 1907 - 19 Mar 2003 VOL 138 ISS 12  
FILE LAST UPDATED: 18 Mar 2003 (20030318/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L1 12850 SEA FILE=REGISTRY LGPA/SQSP  
L2 409787 SEA FILE=REGISTRY SQL=<10  
L3 76 SEA FILE=REGISTRY L1 AND L2  
L4 55 SEA FILE=HCAPLUS L3

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L4 ANSWER 1 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2002:906436 HCAPLUS  
DOCUMENT NUMBER: 138:13498  
TITLE: Method of identifying peptides capable of binding to MHC molecules for treating cancers and autoimmune diseases  
INVENTOR(S): Barnea, Eilon; Beer, Ilan; Ziv, Tamar; Admon, Arie; Dassau, Lior; Buchsbaum, Samuel  
PATENT ASSIGNEE(S): Technion Research and Development Foundation Ltd., Israel  
SOURCE: PCT Int. Appl., 238 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002094981	A2	20021128	WO 2002-IL383	20020516
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AM, AZ, BY, KG  
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PRIORITY APPLN. INFO.: US 2001-290958P P 20010516  
 US 2001-865548 A 20010529

AB A method of identifying peptides originating from a particular cell type and being capable of binding to MHC mols. of a particular haplotype is disclosed. The method comprises obtaining a cell type expressing a sol. and secreted form of the MHC mols. of the particular haplotype; collecting the sol. and secreted form of the MHC mols. of the particular haplotype; and analyzing peptides bound to the sol. and secreted form of the MHC mols. of the particular haplotype, thereby identifying the peptides originating from the particular cell type and being capable of binding to MHC mols. of the particular haplotype. The anal. is performed by mass spectrometry, mass charge ratio and collision induced disintegration in combination with electronic protein database. The peptides are related to protein of interest includes a protein of pathogen, tumor-assocd. antigen or cytokine.

IT 477562-80-4

RL: ANT (Analyte); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(method of identifying peptides capable of binding to MHC mols. for treating cancers and autoimmune diseases)

L4 ANSWER 2 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:857450 HCAPLUS

DOCUMENT NUMBER: 137:380979

TITLE: Human nucleic acids and corresponding proteins useful in the detection and treatment of various cancers

INVENTOR(S): Jakobovits, Aya; Challita-Eid, Pia M.; Faris, Mary; Ge, Wangmao; Hubert, Rene S.; Morrison, Karen; Morrison, Robert Kendall; Raitano, Arthur B.

PATENT ASSIGNEE(S): Agensys, Inc., USA

SOURCE: PCT Int. Appl., 1021 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 25

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002083921	A2	20021024	WO 2002-XI11654	20020410
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PRIORITY APPLN. INFO.: US 2001-282739P P 20010410  
 US 2001-283112P P 20010410  
 US 2001-286630P P 20010425  
 WO 2002-US11654 A 20020410

AB Eighteen genes and their resp. encoded proteins, and variants thereof, are described wherein the gene exhibits restricted expression in normal adult tissue and is overexpressed in various cancers. Suppression subtractive hybridization (SSH) is used to identify cDNAs corresponding to genes that are differentially expressed in cancer; PCR amplification, cloning, and sequencing of gene fragments from SSH yield the full-length cDNAs. Consequently, the gene products provide diagnostic, prognostic, prophylactic, and/or therapeutic targets for cancer. The genes or fragment thereof, their encoded proteins, or variants or fragments thereof, can be used to elicit a humoral or cellular immune response; antibodies or T cells reactive with the gene products can be used in active or passive immunization. [This abstr. record is one of 16 records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.].

IT 473789-00-3 473789-49-0 473790-15-7

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(peptide epitope; human nucleic acids and corresponding proteins useful in the detection and treatment of various cancers)

L4 ANSWER 3 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:857448 HCAPLUS

DOCUMENT NUMBER: 137:380977

TITLE: Human nucleic acids and corresponding proteins useful in the detection and treatment of various cancers

INVENTOR(S): Jakobovits, Aya; Challita-Eid, Pia M.; Faris, Mary; Ge, Wangmao; Hubert, Rene S.; Morrison, Karen; Morrison, Robert Kendall; Raitano, Arthur B.

PATENT ASSIGNEE(S): Agensys, Inc., USA

SOURCE: PCT Int. Appl., 1021 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 25

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002083921	A2	20021024	WO 2002-XG11654	20020410
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WO 2002083921	A2	20021024	WO 2002-US11654	20020410



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WO 2002083921 A2 20021024 WO 2002-US11654 20020410

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PRIORITY APPLN. INFO.: US 2001-282739P P 20010410  
US 2001-283112P P 20010410  
US 2001-286630P P 20010425  
WO 2002-US11654 A 20020410

AB Eighteen genes and their resp. encoded proteins, and variants thereof, are described wherein the gene exhibits restricted expression in normal adult tissue and is overexpressed in various cancers. Suppression subtractive hybridization (SSH) is used to identify cDNAs corresponding to genes that are differentially expressed in cancer; PCR amplification, cloning, and sequencing of gene fragments from SSH yield the full-length cDNAs. Consequently, the gene products provide diagnostic, prognostic, prophylactic, and/or therapeutic targets for cancer. The genes or fragment thereof, their encoded proteins, or variants or fragments thereof, can be used to elicit a humoral or cellular immune response; antibodies or T cells reactive with the gene products can be used in active or passive immunization. [This abstr. record is one of 16 records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.]

IT 473789-00-3 473789-49-0 473790-14-6  
473790-15-7

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(peptide epitope; human nucleic acids and corresponding proteins useful in the detection and treatment of various cancers)

L4 ANSWER 5 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:814341 HCAPLUS  
DOCUMENT NUMBER: 137:334071  
TITLE: Human nucleic acids and corresponding proteins useful in the detection and treatment of various cancers  
INVENTOR(S): Jakobovits, Aya; Challita-Eid, Pia M.; Faris, Mary; Ge, Wangmao; Hubert, Rene S.; Morrison, Karen; Morrison, Robert Kendall; Raitano, Arthur B.  
PATENT ASSIGNEE(S): Agensys, Inc., USA  
SOURCE: PCT Int. Appl., 1021 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 25  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002083921	A2	20021024	WO 2002-US11654	20020410
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WO 2002083921 A2 20021024 WO 2002-XI11654 20020410

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WO 2002083921 A2 20021024 WO 2002-XJ11654 20020410

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WO 2002083921 A2 20021024 WO 2002-XK11654 20020410

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WO 2002083921 A2 20021024 WO 2002-XL11654 20020410  
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WO 2002083921 A2 20021024 WO 2002-XM11654 20020410  
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WO 2002083921 A2 20021024 WO 2002-XN11654 20020410  
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WO 2002083921 A2 20021024 WO 2002-XO11654 20020410  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
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CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2001-282739P P 20010410  
US 2001-283112P P 20010410  
US 2001-286630P P 20010425  
WO 2002-US11654 A 20020410

AB Eighteen genes and their resp. encoded proteins, and variants thereof, are described wherein the gene exhibits restricted expression in normal adult tissue and is overexpressed in various cancers. Suppression subtractive hybridization (SSH) is used to identify cDNAs corresponding to genes that are differentially expressed in cancer; PCR amplification, cloning, and sequencing of gene fragments from SSH yield the full-length cDNAs. Consequently, the gene products provide diagnostic, prognostic, prophylactic, and/or therapeutic targets for cancer. The genes or fragment thereof, their encoded proteins, or variants or fragments thereof, can be used to elicit a humoral or cellular immune response; antibodies or T cells reactive with the gene products can be used in active or passive immunization. [This abstr. record is one of 16 records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.].

IT 473327-84-3

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(peptide epitope; human nucleic acids and corresponding proteins useful in the detection and treatment of various cancers)

L4 ANSWER 6 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:793322 HCAPLUS

DOCUMENT NUMBER: 137:305694

TITLE: Use of peptide tags derived by mass spectrometry to develop queries for searching genomic databases

INVENTOR(S): Mann, Matthias; Mortensen, Peter

PATENT ASSIGNEE(S): MDS Proteomics, Inc., Den.

SOURCE: PCT Int. Appl., 100 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002080649	A2	20021017	WO 2002-US11417	20020409

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-282551P P 20010409

US 2001-285362P P 20010420

AB The instant invention provides methods and systems for searching genomic databases using polypeptide sequence information, such as those obtained from peptide sequencing projects, esp. those using mass spectrometers. According to the instant invention, polypeptide sequences can be reverse translated into multiple sequence tags which are then used to search for identical or similar sequences in genomic databases, such as unannotated genomic databases of human or other organisms. Alternatively, the polypeptide sequences can be directly compared to sequences translated from at least 3, preferably all 6 reading frames of genomic sequences. The instant invention also provides systems for performing the methods of the instant invention, including computer systems, and systems including said computer systems and mass spectrometers linked to said computer systems. The instant invention further provides methods of conducting proteomic businesses using the methods of the instant invention.

IT 472959-53-8

RL: PRP (Properties)

(unclaimed sequence; use of peptide tags derived by mass spectrometry to develop queries for searching genomic databases)

L4 ANSWER 7 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:343974 HCAPLUS

DOCUMENT NUMBER: 138:126898

TITLE: Cell migration through defined, synthetic extracellular matrix analogues

AUTHOR(S): Gobin, Andrea S.; West, Jennifer L.  
CORPORATE SOURCE: Dep. of Bioengineering, Rice Univ., Houston, TX,  
77005-1892, USA  
SOURCE: FASEB Journal (2002), 16(7), 751-753,  
10.1096/fj.01-0759fje  
CODEN: FAJOEC; ISSN: 0892-6638  
PUBLISHER: Federation of American Societies for Experimental  
Biology  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The authors have developed synthetic hydrogel extracellular matrix (ECM)  
analogs that can be used to study mechanisms involved in cell migration,  
such as receptor-ligand interactions and proteolysis. The biomimetic  
hydrogels consist of bioinert polyethylene glycol diacrylate derivs. with  
proteolytically degradable peptide sequences included in the backbone of  
the polymer and adhesive peptide sequences grafted to the network.  
Hydrogels have been developed that degrade as cells secrete proteolytic  
enzymes. Adhesive peptide sequences grafted to the hydrogel provide  
ligands that can interact with receptors on the cell surface to mediate  
adhesion and spreading. In this study, the authors have characterized the  
effects of adhesive ligand d. on fibroblast migration through  
collagenase-degradable and plasmin-degradable hydrogels and on smooth  
muscle cell migration through elastase-degradable hydrogels. In all three  
cases, it was found that cell migration has a biphasic dependence on  
adhesion ligand concn., with optimal migration at intermediate ligand  
levels. Furthermore, both adhesive and proteolytically degradable  
sequences were required for cell migration to occur. These synthetic ECM  
analogs may be useful for 3-D mechanistic studies of many aspects of cell  
migration.  
IT 432542-26-2DP, reaction products with acryloyl  
PEG-N-hydroxysuccinimide  
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(cell migration through defined, synthetic extracellular matrix .  
analog-modified PEG derivs.)  
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT  
L4 ANSWER 8 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2002:172080 HCAPLUS  
DOCUMENT NUMBER: 136:211958  
TITLE: Nucleic acid and corresponding protein named 85P1B3  
useful in the treatment and detection of cancer  
INVENTOR(S): Raitano, Arthur B.; Faris, Mary; Hubert, Rene S.;  
Afar, Daniel; Ge, Wangmao; Challita-Eid, Pia;  
Jakobovits, Aya  
PATENT ASSIGNEE(S): Agensys, Inc., USA  
SOURCE: PCT Int. Appl., 201 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002018578	A2	20020307	WO 2001-US26838	20010828
WO 2002018578	A3	20021003		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2001088466 A5 20020313 AU 2001-88466 20010828  
PRIORITY APPLN. INFO.: US 2000-228432P P 20000828  
WO 2001-US26838 W 20010828

AB A novel gene (designated 85P1B3) and its encoded protein are described. To isolate genes that are involved in the progression of androgen-dependent prostate cancer to androgen-independent cancer, the suppression subtractive hybridization (SSH) procedure was used with cDNA derived from LAPC-4 androgen-dependent xenograft in male SCID mice (3 days post-castration vs. no castration). The 85P1B3 SSH cDNA sequence is a fragment of the Opa-interacting protein 5 gene (OIP-5). A 85P1B3 cDNA clone of 1262 bp was isolated by screening a human testis library, revealing an ORF of 229 amino acids. The 85P1B3 nucleotide and protein sequence correspond to the OIP-5 gene, the protein is predicted to be localized to the cytoplasmic, and the gene was localized to chromosome 15q13.2-q14 (a region implicated in cancers). The restricted expression of 85P1B3 in normal tissues, and the expression detected in bladder cancer, kidney cancer, colon cancer, lung cancer, prostate cancer, ovarian cancer, and breast cancer indicate that 85P1B3 is a therapeutic and/or prophylactic target and a prognostic and/or diagnostic marker for human cancer. The 85P1B3 gene or fragment thereof, or its encoded protein or a fragment thereof, can be used to elicit an immune response.

IT 400853-42-1 400853-70-5 400853-95-4  
400855-45-0 400855-54-1 400856-16-8

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(epitope; nucleic acid and corresponding protein named 85P1B3 useful in the treatment and detection of cancer)

L4 ANSWER 9 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:52003 HCAPLUS

DOCUMENT NUMBER: 136:117371

TITLE: Method of inducing an immunological CTL response by lymphatic system delivery of peptide vaccine

INVENTOR(S): Kundig, Thomas M.; Simard, John J. L.

PATENT ASSIGNEE(S): Switz.

SOURCE: U.S. Pat. Appl. Publ., 48 pp., Cont.-in-part of U. S. Ser. No. 380,534.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002007173	A1	20020117	US 2001-776232	20010202
WO 9902183	A2	19990121	WO 1998-US14289	19980710
WO 9902183	A3	19990514		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,

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 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,  
 CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001097432 A5 20020808 AU 2001-97432 20011221  
 WO 2002062368 A2 20020815 WO 2002-US2033 20020122

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## PRIORITY APPLN. INFO.:

CA 1997-2209815 A 19970710  
 US 1997-988320 B2 19971210  
 WO 1998-US14289 W 19980710  
 US 1999-380534 A2 19990901  
 US 2001-776232 A 20010202

AB Disclosed herein are methods for inducing an immunol. CTL response to an antigen by sustained, regular delivery of the antigen to a mammal so that the antigen reaches the lymphatic system. Antigen is delivered at a level sufficient to induce an immunol. CTL response in a mammal and the level of the antigen in the mammal's lymphatic system is maintained over time sufficient to maintain the immunol. CTL response. Also disclosed is an article of manuf. for delivering an antigen that induces a CTL response in an animal. The antigen can be used in vaccines for cancer or infection.

IT 390749-36-7

RL: PRP (Properties)

(unclaimed sequence; method of inducing an immunol. CTL response by lymphatic system delivery of peptide vaccine)

L4 ANSWER 10 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:719664 HCAPLUS

DOCUMENT NUMBER: 136:99152

TITLE: New minor cyclic peptides from Brachystemma calycinum

AUTHOR(S): Cheng, Yongxian; Zhou, Jun; Tan, Ninghua

CORPORATE SOURCE: Laboratory of Phytochemistry, Kunming Institute of Botany, The Chinese Academy of Sciences, Kunming, 650204, Peop. Rep. China

SOURCE: Zhiwu Xuebao (2001), 43(7), 760-765

CODEN: CHWHAY; ISSN: 0577-7496

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: English

AB From the ethanol ext. of the roots of Brachystemma calycinum D. Don, a Chinese folk herb, four new minor cyclic peptides namely brachystemins A, B, C and D were isolated. Their structures were established as cyclo (Pro1-Phe-Leu-Ala1-Thr-Pro2-Ala2-Gly), cyclo (Pro1-Ala-Phe-Trp-Asp-Pro2-Leu-Gly), cyclo (Pro1-Ile-Gly-Pro2-Val-Ala1-Ala2-Tyr) and cyclo (Pro-OMet-Trp-Ile-Gly-Ala-Leu-Asp), resp. by means of extensive spectral methods.

IT 389064-17-9P, Brachystemin B

RL: NPO (Natural product occurrence); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)

(cyclic peptides from Brachystemma calycinum)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:628094 HCAPLUS

DOCUMENT NUMBER: 137:10877

TITLE: Smooth muscle cell growth in photopolymerized hydrogels with cell adhesive and proteolytically degradable domains: synthetic ECM analogs for tissue engineering

AUTHOR(S): Mann, B. K.; Gobin, A. S.; Tsai, A. T.; Schmedlen, R. H.; West, J. L.

CORPORATE SOURCE: Department of Bioengineering, Rice University, Houston, TX, 77005-1892, USA

SOURCE: Biomaterials (2001), 22(22), 3045-3051

CODEN: BIMADU; ISSN: 0142-9612

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Photopolymerizable polyethylene glycol (PEG) derivs. have been investigated as hydrogel tissue engineering scaffolds. These materials have been modified with bioactive peptides in order to create materials that mimic some of the properties of the natural extracellular matrix (ECM). The PEG derivs. with proteolytically degradable peptides in their backbone have been used to form hydrogels that are degraded by enzymes involved in cell migration, such as collagenase and elastase. Cell adhesive peptides, such as the peptide RGD, have been grafted into photopolymd. hydrogels to achieve biospecific cell adhesion. Cells seeded homogeneously in the hydrogels during photopolymn. remain viable, proliferate, and produce ECM proteins. Cells can also migrate through hydrogels that contain both proteolytically degradable and cell adhesive peptides. The biol. activities of these materials can be tailored to meet the requirements of a given tissue engineering application by creating a mixt. of various bioactive PEG derivs. prior to photopolymn.

IT 432542-27-3P

RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(smooth muscle cell growth in photopolymd. hydrogels with cell adhesive and proteolytically degradable domains)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:565069 HCAPLUS

DOCUMENT NUMBER: 135:151623

TITLE: HIV peptides and nucleic acids encoding them for diagnosis and control of HIV infection

INVENTOR(S): Fomsgaard, Anders; Brunak, Soren; Buus, Soren; Corbet, Sylvie; Lauemoller, Sanne Lise; Hansen, Jan

PATENT ASSIGNEE(S): Statens Serum Institut, Den.

SOURCE: PCT Int. Appl., 383 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2001055177	A2	20010802	WO 2001-DK59	20010129
WO 2001055177	A3	20020307		

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1250351	A2	20021023	EP 2001-946867	20010129
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: EP 2000-610017 A 20000128  
US 2000-179333P P 20000131  
WO 2001-DK59 W 20010129

AB The present invention relates to the identification of CTL epitopes by the combination of biochem. assays, statistical matrix calcns., and artificial neural networks. A set of peptide libraries are used to generate complete unbiased matrixes representing peptide-MHC interactions used to generate a primary prediction of MHC binding for all possible non-redundant peptides. The best binders are subject to a quant. biochem. binding assay and subsequently a computerized artificial neural network prediction program built from these in vitro exptl. MHC-I binding data. The method further comprises improving the identified epitope by replacing amino acids, and testing the identified CTL epitopes in in vitro and in vivo models. Thus, one aspect of the invention relates to the identification of a CTL component of a vaccine and the development of said CTL component. Another aspect of the invention relates to the identified epitopes of said CTL component.

IT 334730-91-5 352627-08-8 352627-73-7  
RL: ANT (Analyte); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(identification cytotoxic T lymphocyte epitopes of HIV proteins and nucleic acids encoding them for diagnosis and control of HIV infection)

IT 352628-04-7 352628-05-8 352628-06-9 352635-41-7  
RL: PRP (Properties)  
(unclaimed sequence; HIV peptides and nucleic acids encoding them for diagnosis and control of HIV infection)

L4 ANSWER 13 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2001:351063 HCAPLUS  
Correction of: 2001:265260  
DOCUMENT NUMBER: 134:365695  
Correction of: 134:309684  
TITLE: Inducing cellular immune responses to human immunodeficiency virus-1 using peptide and nucleic acid compositions  
INVENTOR(S): Sette, Alessandro; Sidney, John; Southwood, Scott; Livingston, Brian D.; Chesnut, Robert; Baker, Denise Marie; Celis, Esteban; Kubo, Ralph T.; Grey, Howard M.  
PATENT ASSIGNEE(S): Epimmune Inc., USA  
SOURCE: PCT Int. Appl., 448 pp.  
CODEN: PIXXD2



DOCUMENT TYPE: Patent  
LANGUAGE: English  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001024810 A1		20010412	WO 2000-US27766	20001005

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-412863 19991005

AB This invention uses knowledge of the mechanisms by which antigens are recognized by T cells to identify and prep. human immunodeficiency virus (HIV) epitopes, and to develop epitope-based vaccines directed towards HIV. More specifically, this application communicates the discovery of pharmaceutical compns. and methods of use in the prevention and treatment of HIV infection.

IT 124859-55-8 334730-89-1 334731-84-9  
334731-85-0 334731-87-2 334732-89-7  
340238-34-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(epitopes of HIV-1, cytotoxic T lymphocyte and helper T lymphocyte as vaccine for inducing cellular immune responses to human immunodeficiency virus-1)

L4 ANSWER 14 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:265260 HCAPLUS

DOCUMENT NUMBER: 134:309684

TITLE: Inducing cellular immune responses to human immunodeficiency virus-1 using peptide and nucleic acid compositions

INVENTOR(S): Sette, Alessandro; Sidney, John; Southwood, Scott; Livingston, Brian D.; Chesnut, Robert; Baker, Denise Marie; Celis, Esteban; Kubo, Ralph T.; Grey, Howard M.

PATENT ASSIGNEE(S): Epimmune Inc., USA

SOURCE: PCT Int. Appl., 448 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001024810 A1		20010412	WO 2000-US27766	20001005

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG

## PRIORITY APPLN. INFO.:

US 1999-412863 19991005

AB This invention uses knowledge of the mechanisms by which antigens are recognized by T cells to identify and prep. human immunodeficiency virus (HIV) epitopes, and to develop epitope-based vaccines directed towards HIV. More specifically, this application communicates the discovery of pharmaceutical compns. and methods of use in the prevention and treatment of HIV infection.

IT 124859-55-8 334730-89-1 334730-90-4  
334730-91-5 334731-84-9 334731-85-0  
334731-87-2 334732-89-7 334732-91-1  
334754-07-3

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(HIV-1 supermotif peptide; epitopes of HIV-1, cytotoxic T lymphocyte and helper T lymphocyte as vaccine for inducing cellular immune responses to human immunodeficiency virus-1)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:50831 HCAPLUS

DOCUMENT NUMBER: 134:114851

TITLE: Modified human granulocyte-colony stimulating factor and its production by recombinant expression in transformed Escherichia coli

INVENTOR(S): Kwon, Se Chang; Jung, Sung Youb; Bae, Sung Min; Lee, Gwan Sun

PATENT ASSIGNEE(S): Hanmi Pharm. Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 69 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001004329	A1	20010118	WO 2000-KR733	20000707
W: AU, BR, CA, CN, JP, NZ, RU, SG, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
KR 2001009171	A	20010205	KR 1999-27418	19990708
BR 2000012265	A	20020312	BR 2000-12265	20000707
EP 1194575	A1	20020410	EP 2000-942494	20000707
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2003504069	T2	20030204	JP 2001-509533	20000707

## PRIORITY APPLN. INFO.:

KR 1999-27418 A 19990708

WO 2000-KR733 W 20000707

AB Modified human granulocyte-colony stimulating factors (hG-CSF) are produced by culturing Escherichia coli transformed with expression vectors comprising a gene encoding a modified hG-CSF to produce and secrete the modified hG-CSF to periplasm. The modified hG-CSFs being obtained replacing at least one of the 1st, 2nd, 3rd and 17th amino acids of wild-type hG-CSF with another amino acid. Expression of hG-CSF variants is enhanced by construction of chimeric genes comprising sequences encoding the Escherichia coli wild-type or modified thermoresistant enterotoxin II signal peptide, the E. coli .beta.-lactamase signal peptide, or the E. coli gene III signal peptide, as well as use of the Shine-Dalgarno sequence from E. coli enterotoxin II gene.

IT 321308-73-0

RL: PRP (Properties)

(Unclaimed; modified human granulocyte-colony stimulating factor and its prodn. by recombinant expression in transformed Escherichia coli)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE.FORMAT

L4 ANSWER 16 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:772489 HCAPLUS

DOCUMENT NUMBER: 133:355232

TITLE: Enzymatically activated polymeric drug conjugates

INVENTOR(S): Pachence, James M.; Belinka, Benjamin A.; Ramani, Thulasi

PATENT ASSIGNEE(S): Veritas Medical Technologies, Inc., USA

SOURCE: PCT Int. Appl., 100 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000064486	A2	20001102	WO 2000-US11670	20000428
WO 2000064486	A3	20010426		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1176985	A2	20020206	EP 2000-928630	20000428
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
JP 2002542304	T2	20021210	JP 2000-613476	20000428
PRIORITY APPLN. INFO.:			US 1999-131404P	P 19990428
			US 1999-163090P	P 19991102
			WO 2000-US11670	W 20000428

AB The present invention relates to a polymeric drug conjugate with one or more biol. active agents conjugated via an enzymically cleavable linker to either a regular repeating linear unit comprising a water sol. polymer segment and a multifunctional chem. moiety, or a branched polymer comprising two or more water sol. polymer segments each bound to a common multifunctional chem. moiety, as well as to methods of making such conjugates. The present invention is also directed to pharmaceutical compns. comprising such conjugates and to the use of such conjugates to treat pathol. conditions. A conjugate consisting of Fmoc-doxorubicin-14-O-hemiglutarate deriv. as an active agent, tetrapeptide Val-Gly-Pro-Ala as an enzymically cleaved linker, a multifunctional chem. moiety prepd. from N-fluorenylmethoxycarbonyl-O-tert-butylserine, N-(benzyloxycarbonyl)-ethane-1,2-diamine, and tetrahydropyranyl ether, and polyethylene glycol 2000 was prepd.

IT 304851-60-3D, conjugates with polymers and multifunctional chem. moieties and biol. active agents

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(polymeric drug conjugate contg. water-sol. polymers and

multifunctional chem. moieties and enzymically cleavable linkers and  
biol. active agents)

IT **86563-77-1D**, reaction products with PEG-serine copolymer

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of polymeric drug conjugate contg. water-sol. polymers and  
multifunctional chem. moieties and enzymically cleavable linkers and  
biol. active agents)

IT **86563-78-2**

RL: PRP (Properties)

(unclaimed sequence; enzymically activated polymeric drug conjugates)

L4 ANSWER 17 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:144132 HCAPLUS

DOCUMENT NUMBER: 132:152142

TITLE: Synthesis of peptides with N-substituted glycines as  
luteinizing hormone-releasing hormone inhibitory  
analogs for treatment of hormone-dependent tumors.

INVENTOR(S): Dechantsreiter, Michael; Kessler, Horst; Bernd,  
Michael; Kutscher, Bernhard; Beckers, Thomas

PATENT ASSIGNEE(S): Asta Medica A.-G., Germany

SOURCE: Ger. Offen., 32 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19941248	A1	20000302	DE 1999-19941248	19990831
PRIORITY APPLN. INFO.:			DE 1998-19839817	19980901
OTHER SOURCE(S): MARPAT 132:152142				

AB Title decapeptide compds. in which one or two glycine amine groups have  
been substituted with side-chain equiv. of natural or non-natural amino  
acids were prepd. as analogs of LH-RH, for use in treating  
hormone-dependent tumors or for LH-RH suppression therapies (no data).  
Thus, amino acid substitutes were prepd. by, for example, alkylation of an  
amine such as 4-Cl-C<sub>6</sub>H<sub>4</sub>-NH<sub>2</sub> with BrCH<sub>2</sub>COOEt, or amination of CHOCO<sub>2</sub>H with  
RNH(CH<sub>2</sub>)<sub>2</sub>OC(CH<sub>3</sub>)<sub>3</sub> (R = protecting group). The amino acid substitutes  
could then be used in solid-phase synthesis (BOC or Fmoc chem.) to prep.  
fragments for soln. coupling to give the final decapeptides.

IT **258332-94-4P**

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological  
study); PREP (Preparation); USES (Uses)

(synthesis of N-substituted glycines for use in prepn. of peptides as  
LH-releasing hormone inhibitory analogs for treatment of  
hormone-dependent tumors)

L4 ANSWER 18 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:217439 HCAPLUS

DOCUMENT NUMBER: 131:84673

TITLE: Pseudo First-Order Cleavage of an Immobilized  
Substrate by an Enzyme Undergoing Two-Dimensional  
Surface Diffusion

AUTHOR(S): Trigiante, Giuseppe; Gast, Alice P.; Robertson,  
Channing R.

CORPORATE SOURCE: Department of Chemistry, Stanford University,  
Stanford, CA, 94305-5025, USA

SOURCE: Journal of Colloid and Interface Science (1999),

213(1), 81-86  
CODEN: JCISA5; ISSN: 0021-9797

PUBLISHER: Academic Press  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB In this paper we study the reaction kinetics of an enzyme adsorbed on a peptide substrate surface. Although the adsorption is effectively irreversible, the enzyme is able to diffuse on the surface. Our reaction system consisted of the enzyme collagenase and the oligopeptide FALGPA, a substrate for the enzyme. A quartz surface was coated with covalently bound substrate mols. The extent of reaction was monitored continuously in a flow cell via UV absorption. The data are compatible with a kinetic model based on a pseudo first-order diffusion/orientation rate-limiting step followed by a relatively fast chem. cleavage step. This model was validated by examg. the pH dependence of the rate const. (c) 1999 Academic Press.

IT 78832-65-2D, immobilized

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(pseudo first-order cleavage of an immobilized substrate by an enzyme undergoing two-dimensional surface diffusion)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 19 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:640834 HCAPLUS  
DOCUMENT NUMBER: 127:326501  
TITLE: Enantiomeric screening process and compositions therefor  
INVENTOR(S): Forster, Anthony C.  
PATENT ASSIGNEE(S): President and Fellows of Harvard College, USA;  
Forster, Anthony C.  
SOURCE: PCT Int. Appl., 89 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9735194	A2	19970925	WO 1997-US4176	19970321
WO 9735194	A3	19971218		
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9725313	A1	19971010	AU 1997-25313	19970321
PRIORITY APPLN. INFO.:			US 1996-622338	19960321
			WO 1997-US4176	19970321

AB The present invention makes available a powerful directed approach for identifying enantioselective compds. which bind to biol. targets. The goal was to provide a method for ligand and drug discovery that may enable one to rapidly discover drug candidates for protein targets. As a general overview, the present invention relates, in one aspect, to a method for

identifying compds. which interact with a target mol. by (1) contacting a screening mol. with a variegated compd. library, wherein the screening mol. comprises solid target mol. or the enantiomer thereof if the target mol. is chiral; (2) selecting from the library compds. which have a desired interaction with the target mol.; and (3) testing the ability of the enantiomer of a compd. selected in step (2) to interact with the target mol. The method was tested with 3 different drug targets and 2 different control targets, and the results presented support the feasibility of the method.

IT **197438-20-3P**

RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(enantiomeric screening process and compns. in relation to drug discovery)

L4 ANSWER 20 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:287127 HCAPLUS

DOCUMENT NUMBER: 126:321066

TITLE: Protease-mediated drug delivery system

INVENTOR(S): Kennedy, James C.; Ringuet, Michel; Pottier, Roy H.

PATENT ASSIGNEE(S): Queen's University At Kingston, Can.

SOURCE: U.S., 10 pp., Cont.-in-part of U.S. Ser. No. 833,183, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5618790	A	19970408	US 1994-213897	19940316
PRIORITY APPLN. INFO.:			US 1990-593867	19901005
			US 1992-833183	19920210

AB Lipophilic and amphiphilic therapeutic or diagnostic agents that have water-solubilizing groups attached thereto by bonds that can be cleaved readily by one or more of the various proteases that are active in the extracellular fluid or on the surfaces of cells in many types of malignant tissue may accumulate selectively in such malignant tissues. Protease-mediated removal of the water-solubilizing groups converts such drugs into lipophilic or amphiphilic forms which are more sol. in plasma membrane lipids and which therefore enter cells more readily. Since the extracellular fluid in most non-malignant tissues under normal circumstances has little such protease activity, removal of the water solubilizing groups takes place primarily within malignant tissues, with consequent preferential accumulation of the lipophilic or amphiphilic forms of the drug within malignant tissues. Certain lipophilic and amphiphilic porphyrins and chlorins may be modified by the addn. of water solubilizing groups, such as alcs., which are attached by short polypeptide chains, that are stable while in the circulation but are cleaved by proteases in malignant tissue to provide novel compds. useful for the photodynamic therapy of cancer.

IT **86563-78-2 189336-21-8 189336-22-9**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(protease-mediated drug delivery system)

L4 ANSWER 21 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:967272 HCAPLUS  
 DOCUMENT NUMBER: 124:7073  
 TITLE: Hepatitis C virus (HCV)-derived peptides for inducing cytotoxic T lymphocyte (CTL) against HCV  
 INVENTOR(S): Chisari, Francis V.; Cerny, Andreas  
 PATENT ASSIGNEE(S): Scripps Research Institute, USA  
 SOURCE: PCT Int. Appl., 86 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9525122	A1	19950921	WO 1995-US3224	19950316
W: CA, JP, MX				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5709995	A	19980120	US 1994-214650	19940317
CA 2184890	AA	19950921	CA 1995-2184890	19950316
EP 759937	A1	19970305	EP 1995-914048	19950316
EP 759937	B1	20000830		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 09510455	T2	19971021	JP 1995-524151	19950316
AT 195953	E	20000915	AT 1995-914048	19950316
US 2002115061	A1	20020822	US 1997-854825	19970512
PRIORITY APPLN. INFO.: US 1994-214650 A 19940317				
WO 1995-US3224 W 19950316				

AB Peptides derived from various regions of the HCV genome are provided to boost the cellular immune system to fight or prevent HCV hepatitis. A total of 53 HCV-1-derived peptides were tested for capability to induce HCV-specific responses. The peptides of interest are ADLMGYIPLV (Core131-140), LLALLSCLTV (Core178-187), QLRRHIDLLV (E257-266), LLCPAGHAV (NS31169-1177), KLVALGINAV (NS31406-1415), SLMAFTAAV (NS41789-1797), LLFNILGGWV (NS41807-1816), and ILDSFDPLV (NS52252-2260). Such mols. are used for the treatment and prevention of acute or chronic HCV hepatitis; suitable pharmaceutical compns. and methods using such compns. are disclosed.

IT 171105-38-7 171105-39-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (peptide derived from hepatitis C virus; assessment of hepatitis C virus-derived peptides for capability of inducing cytotoxic T lymphocyte against HCV)

L4 ANSWER 22 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:961716 HCAPLUS  
 DOCUMENT NUMBER: 124:48923  
 TITLE: Antibodies specific for proteolyzed forms of protein kinase C .alpha.  
 AUTHOR(S): Kikuchi, Hidehiko; Imajoh-Ohmi, Shinobu  
 CORPORATE SOURCE: Institute of Medical Science, University of Tokyo, 4-6-1, Shirokanedai Minato-ku, Tokyo, 108, Japan  
 SOURCE: Biochimica et Biophysica Acta (1995), 1269(3), 253-9  
 CODEN: BBACAQ; ISSN: 0006-3002  
 PUBLISHER: Elsevier  
 DOCUMENT TYPE: Journal



LANGUAGE: English

AB The activation of protein kinase C (PKC) is irreversibly regulated by limited proteolysis catalyzed by a calcium-activated neutral cysteine protease, calpain. Calpain cleaves PKC.alpha. at specific sites in the hinge region between the catalytic and the regulatory domains of this kinase. Here we show a novel method for prodn. of antibodies that bind specifically to the catalytic fragment of PKC.alpha. but not to the unproteolyzed protein. To detect proteolyzed PKC.alpha., cleavage site-directed antibodies, which recognize amino-terminal regions in the nascent catalytic fragments and do not cross-react with the unproteolyzed enzymes, were raised using synthetic peptides corresponding to the amino-terminal sequences. The synthetic peptides used in this study were the sequences of human PKC.alpha. at the cleavage sites by m- and .mu.-types of calpains (LGPAGNKV and VISPESEDRKQPSNNLDRVKLT, resp.) and they are designated as CF.alpha.2, CF.alpha.4, in this order. Each synthetic peptide was injected into rabbit after conjugation with a carrier protein. The antibodies thus obtained (anti-CF.alpha.2 or -CF.alpha.4) specifically reacted with either the 46- or 45-kDa catalytic fragment of PKC.alpha., resp., whereas they did not cross-react with other fragments. Furthermore, the antibodies did not bind to the unproteolyzed enzyme nor fragments of PKC.alpha. obtained by treatment with other proteinases unless the fragment carried the same amino-terminal sequence. When human platelets were treated with calcium ionophore, the catalytic fragments of PKC.alpha. (45- and 46-kDa) were detected in the cytosol by immunoblotting with the antibodies. However, these antibodies did not bind unproteolyzed 80-kDa PKC.alpha., although this form was dominant in the cytosol of the calcium ionophore-treated human platelets. In addn., the 45-kDa catalytic fragment of PKC.alpha. was detected in apoptotic human fibroblast TIG-3 cells cultured in serum-free medium. Our method is applicable for anal. of proteolysis in various cellular states.

IT 114454-63-6

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(immunogen; antibodies specific for proteolyzed forms of protein kinase C .alpha.)

L4 ANSWER 23 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:460828 HCAPLUS

DOCUMENT NUMBER: 122:310033

TITLE: Modified FALGPA assay for cell-associated collagenolytic activity

AUTHOR(S): Jackson, Rosalind J.; Dao, My Lien; Lim, Daniel V.

CORPORATE SOURCE: Department Biology, University South Florida, Tampa, FL, 33620-5150, USA

SOURCE: Journal of Microbiological Methods (1995), 21(2), 209-15

CODEN: JMIMDQ; ISSN: 0167-7012

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A continuous spectrophotometric assay monitoring the hydrolysis of the synthetic peptide 2-furanacryloyl-L-leucylglycyl-L-prolyl-L-alanine (FALGPA) is used to measure collagenase activity of both bacterial and vertebral collagenases. In the present study, a protocol was developed to adapt this assay to the measurement of cell-assocd. FALGPA hydrolytic activity in bacteria. The bacteria tested included *Bacillus cereus*, *Streptococcus agalactiae*, *Streptococcus mutans*, *Enterococcus faecalis*, and *Escherichia coli*, and various levels of activity were identified. The method presented here allows the detection of FALGPA hydrolysis using a small quantity of cells without the need for prior purifn. of the

collagenolytic enzyme or collection and concn. of a large vol. of culture supernatant fluid.

IT 78832-65-2

RL: ANT (Analyte); ANST (Analytical study)  
(modified FALGPA assay for cell-assocd. collagenolytic activity)

L4 ANSWER 24 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:13705 HCAPLUS

DOCUMENT NUMBER: 122:10665

TITLE: Site-Specific Religation of G-CSF Fragments through a Thioether Bond

AUTHOR(S): Gaertner, Hubert F.; Offord, Robin E.; Cotton, Ron; Timms, David; Camble, Roger; Rose, Keith

CORPORATE SOURCE: Departement de Biochimie Medicale, Centre Medical Universitaire, Geneva, 1211, Switz.

SOURCE: Bioconjugate Chemistry (1994), 5(4), 333-8  
CODEN: BCCHEs; ISSN: 1043-1802

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new approach is described for linking, through a thioether bond, the C-terminus of one unprotected peptide with the N-terminus of another. Homocysteine thiolactone is attached to the C-terminus of one peptide by reverse proteolysis and provides through hydroxylamine treatment a free sulfhydryl group. The .alpha.-amino group of a second peptide is selectively iodoacetylated by reaction with iodoacetic anhydride at pH 6.0 or the N-hydroxysuccinimide ester deriv. at pH 7.0. Coupling of the two modified fragments occurs in a spontaneous alkylation reaction under mild conditions. After preliminary expts. with small peptides, this approach was extended to large protein fragments derived from recombinant analogs of G-CSF by enzymic digestion. This approach provides a means of making head-to-tail protein chimeras or introducing noncoded structural elements into a protein.

IT 159348-01-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, via S-alkylation of homocysteine thiolactone deriv. with iodoacetyl peptide fragment)

L4 ANSWER 25 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:503061 HCAPLUS

DOCUMENT NUMBER: 121:103061

TITLE: Enzymes on Immobilized Substrate Surfaces: Diffusion

AUTHOR(S): Gaspers, Pamela B.; Robertson, Channing R.; Gast, Alice P.

CORPORATE SOURCE: Department of Chemical Engineering, Stanford University, Stanford, CA, 94305-5025, USA

SOURCE: Langmuir (1994), 10(8), 2699-704  
CODEN: LANGD5; ISSN: 0743-7463

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors' goal is to measure the influence of reaction on the lateral mobility of an enzyme on the surface of an immobilized substrate. The authors examine the mobility of collagenase on surfaces comprising immobilized peptides susceptible to cleavage by collagenase. To probe the effect of reaction on enzyme mobility, the authors study adsorption and subsequent movement of both active and inactive collagenase on substrate surfaces. Using the technique of total internal reflection fluorescence, the authors find that collagenase adsorption onto the surface is transport limited under the flow conditions used herein. After assessing the dependence of surface coverage on bulk concn., the authors examine enzyme

mobility at low and high surface coverages via a combined method of total internal reflection and fluorescence recovery after pattern photobleaching. Active collagenase moves laterally on the substrate surface more slowly than inactive collagenase at both low and high surface coverages indicating the interplay between the processes of reaction and surface diffusion.

IT 78832-65-2DP, FALGPA, reaction products with silanized glass  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L4 ANSWER 26 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:31209 HCAPLUS

DOCUMENT NUMBER: 120:31209

TITLE: Evaluation of the .beta.-sheet-structure-stabilizing potential of 20 kinds of amino acid residues in protected deca- and pentadecapetides

AUTHOR(S): Lee, Jin Shik; Murakawa, Yuka; Fujino, Kentarou; Narita, Mitsuaki

CORPORATE SOURCE: Fac. Technol., Tokyo Univ. Agric. Technol., Nakamachi, 184, Japan

SOURCE: Bulletin of the Chemical Society of Japan (1993), 66(8), 2283-8

CODEN: BCSJA8; ISSN: 0009-2673

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Deca- and pentadecapeptides Boc-[X-Ala-Glu(OCH<sub>2</sub>Ph)-Leu-Gly]<sub>n</sub>-OCH<sub>2</sub>COPh, [I; Boc = Me<sub>3</sub>CO<sub>2</sub>C, X = Ala, Arg(Mts), Asn, Asp(OCH<sub>2</sub>Ph), Cys(CH<sub>2</sub>Ph), Gln, Glu(OCH<sub>2</sub>Ph), Gly, His(CH<sub>2</sub>OCH<sub>2</sub>Ph), Ile, Leu, Lys(Z), Met(O), Phe, Pro, Ser(CH<sub>2</sub>Ph), Thr(CH<sub>2</sub>Ph), Trp(CHO), Tyr(CH<sub>2</sub>Ph), Val, n = 2, 3, Mts = 2-mesitylenesulfonyl, Z = PhCH<sub>2</sub>O<sub>2</sub>C] were prepd. by fragment condensation of the corresponding pentapeptides I (n = 1). The .beta.-sheet-structure-stabilizing potentials [.ltbbrac.SP.beta.'.rtbbrac. values] of the guest amino acids in I (n = 2, 3) were evaluated by solvent titrn. to widen the application range of .ltbbrac.SP.beta..rtbbrac. values previously detd. from I (n = 1). The .ltbbrac.SP.beta.'.rtbbrac. values detd. from I (n = 2, 3) were different from the .ltbbrac.SP.beta..rtbbrac. values from I (n = 1). CD showed that I (n = 2, 3) adopted helix and random coil structures in org. solvents. The helix structure influences the solvation mechanism of these protected peptides.

IT 151264-92-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and .beta.-sheet conformational propensity of, in org. solvents)

L4 ANSWER 27 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:650478 HCAPLUS

DOCUMENT NUMBER: 119:250478

TITLE: The influence of .beta.-alanine and 4-aminobutyric acid residues on the solubility of peptides containing them

AUTHOR(S): Lee, Jin Shik; Murakawa, Yuka; Hanami, Akira; Narita, Mitsuaki

CORPORATE SOURCE: Fac. Technol., Tokyo Univ. Agric. Technol., Koganei, 184, Japan

SOURCE: Bulletin of the Chemical Society of Japan (1993), 66(7), 2006-10

CODEN: BCSJA8; ISSN: 0009-2673

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The influence of unnatural amino acid residues, i.e., .beta.-alanine (.beta.-Ala) and 4-aminobutyric acid (.gamma.-Aba) residues, on the soly. of peptides contg. them was studied in org. solvents. The difference between the solubilities of peptides contg. .beta.-Ala, .gamma.-Aba, Pro, Gly, Leu, and Asp(OCH<sub>2</sub>Ph) was investigated by the solvent titrn. method via IR. The order of their solubilities is as follows, peptides contg. Pro > .beta.-Ala > .gamma.-Aba > Asp(OCH<sub>2</sub>Ph) > Leu > Gly. The extremely high soly. of peptides contg. Pro residues is explained by the concept of peptide segment sepn. caused by the tertiary peptide bond of the Pro residue. The high soly. of peptides contg. .beta.-Ala or .gamma.-Aba residues is believed to be due to the difference of the geometries of the Gly, .beta.-Ala, and .gamma.-Aba residues. Their effective concn. seemed to be less important than their geometry. The role of .beta.-Ala and .gamma.-Aba residues in the soly. of peptides is similar to the role of Pro residues rather than Asp(OCH<sub>2</sub>Ph), Gly, and Leu residues.

IT 151264-92-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and soly. of, effect of .beta.-alanine and .gamma.-aminobutyric acid replacement on)

L4 ANSWER 28 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:473066 HCAPLUS

DOCUMENT NUMBER: 119:73066

TITLE: Multiple column peptide synthesis. Part 2

AUTHOR(S): Meldal, Morten; Holm, Charlotte Bisgaard; Bojesen,

Gustav; Jakobsen, Mogens Havsteen; Holm, Arne

CORPORATE SOURCE: Dep. Chem., Carlsberg Lab., Copenhagen, Den.

SOURCE: International Journal of Peptide & Protein Research

(1993), 41(3), 250-60

CODEN: IJPPC3; ISSN: 0367-8377

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A manually operated app. for parallel multiple column solid-phase peptide synthesis is described. It employs 9-fluorenylmethoxycarbonyl (Fmoc) amino acid 3,4-dihydro-4-oxo-1,2,3-benzotriazin-3-yl (Dhbt) or pentafluorophenyl (Pfp) esters in the continuous flow version of the polyamide method on small packed columns of kieselguhr supported resin in a reaction block of Teflon. The solvents and deprotecting reagents are dispensed from two washers in a parallel fashion and reagent consumption is low. Activated and protected amino acids are transferred from a dispenser tray as solns., 8 at a time. The use of the method is demonstrated by the synthesis of overlapping peptides from a protein structure and of analogous protease substrates. The products have been characterized by HPLC, fast-atom-bombardment mass spectrometry, and amino acid anal.

IT 148825-03-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, via multiple column solid-phase method)

L4 ANSWER 29 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:192247 HCAPLUS

DOCUMENT NUMBER: 118:192247

TITLE: Purification of synthetic peptides using reversible chromatographic probes based on the Fmoc molecule

AUTHOR(S): Ball, H. L.; Mascagni, P.

CORPORATE SOURCE: Italfarmaco Res. Cent., Milan, Italy

SOURCE: International Journal of Peptide & Protein Research

(1992), 40(5), 370-9

CODEN: IJPPC3; ISSN: 0367-8377

DOCUMENT TYPE: Journal  
LANGUAGE: English

AB A rapid, reversible procedure for purifying synthetic peptides has been developed based on the specific incorporation of 9-(4-carboxyfluorenyl)methoxycarbonyl (4-COR-Fmoc; R = lipophilic or charged group) group onto the terminal amino acid of peptidyl resins. The acid-stable 4-COR-Fmoc derivs. were synthesized with a variety of chem. groups, thus altering the chromatog. properties of the target peptides and permitting their convenient purifn., either by reversed-phase HPLC or ion exchange chromatog. The assembly of the peptides involved a capping step to prevent the formation of deletion forms. The 4-COR-Fmoc derivs. were incorporated either as preformed amino acid conjugates or as activated succinimidyl esters. After HF cleavage and purifn., the 4-COR-Fmoc probes were quant. removed with org. bases. The efficiency of the technique was demonstrated by the purifn. of small- to large-sized peptides, including a cyclic analog.

IT **147097-70-9P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and purifn. and deprotection of, with org. base)

L4 ANSWER 30 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:169618 HCAPLUS

DOCUMENT NUMBER: 118:169618

TITLE: Preparation of a hexapeptide as angiotensin-converting enzyme inhibitor.

INVENTOR(S): Matsumura, Nobuyasu; Shimizu, Toshio

PATENT ASSIGNEE(S): Shadan Hojin Marino Foramu 21, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04300894	A2	19921023	JP 1991-87267	19910328
PRIORITY APPLN. INFO.:			JP 1991-87267	19910328

AB The solid-phase synthesis of H-Leu-Gly-Pro-Ala-Gly-Arg-OH from the appropriate Fmoc-protected amino acids as well as its isolation from tuna intestines are reported. In an in vitro study using hippurylhistidylleucine as the substrate, this hexapeptide had an IC50 of 1200 .mu.M against angiotensin-converting enzyme I.

IT **146762-91-6P**

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and isolation of, from tuna intestines, as angiotensin-converting enzyme inhibitor)

L4 ANSWER 31 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1992:546002 HCAPLUS

DOCUMENT NUMBER: 117:146002

TITLE: Purification and substrate specificity of an endopeptidase from the human oral spirochete Treponema denticola ATCC 35405, active on furylacryloyl-Leu-Gly-Pro-Ala and bradykinin

AUTHOR(S): Makinen, Kauko K.; Makinen, Pirkko Liisa; Syed, Salam A.

CORPORATE SOURCE: Sch. Dent., Univ. Michigan, Ann Arbor, MI, 48109-1078,

USA  
SOURCE: Journal of Biological Chemistry (1992), 267(20),  
14285-93  
CODEN: JBCHA3; ISSN: 0021-9258  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB An endopeptidase was purified to homogeneity from the cell exts. of *T. denticola* ATCC 35405 (a human oral spirochete) by a procedure that comprised dialysis, anion exchange fast protein liq. chromatog. (FPLC), hydroxylapatite FPLC, immobilized metal affinity FPLC, FPLC chromatofocusing, and two consecutive gel permeation FPLC steps. The enzyme is a 62-kDa protein with an isoelec. point of 6.5-7.0. Expts. with enzyme inhibitors suggest that this enzyme is a metallopeptidase and that its activity is not dependent on sulfhydryl or serine residues. The enzyme is active on furylacryloyl-Leu-Gly-Pro-Ala (FALGPA; pH optimum near 6.25), bradykinin (Bk), and several Bk-related peptides. In FALGPA, the cleavage site is the Leu-Gly bond. An imino acid is absolutely necessary in position P'2. The shortest hydrolyzed peptide was FALGPA, the hydrolysis of which is strongly and competitively inhibited by Bk ( $K = 5.0 \mu\text{M}$ ). The pyrophosphate ion and phosphoramidon also inhibited the hydrolysis of FALGPA. The enzyme does not hydrolyze all typical synthetic collagenase substrates, Azocoll, Azocasein, or Type I and Type IV collagens, or any other proteins tested. In Bk-related peptides, the hydrolyzed bond was Phe5-Ser6. Since a Bk antagonist and a Bk-potentiating pentapeptide also were good substrates, it is possible that the enzyme hydrolyzes Bks and related peptides only because of the coincidental, specific amino acid sequence of those substrates. A proposal is made that since a substantial portion of the amino acid sequence of FALGPA is present in collagen (and addnl. acknowledging that the furylacryloyl residue structurally resembles that of proline), the natural substrates of this enzyme may be small, sol. collagen fragments produced by other enzymes from periodontal connective tissue, and that such peptides are important for the nutrition and pathogenicity of *T. denticola*.  
IT 78832-65-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with endometallopeptidase of *Treponema denticola*, structure in relation to)  
L4 ANSWER 32 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1992:543655 HCAPLUS  
DOCUMENT NUMBER: 117:143655  
TITLE: Antagonist and agonist activities of synthetic peptide fragments of g-CSF and their protein conjugates  
AUTHOR(S): LoCastro, Stephen M.; Silvestri, Joanne S.; Lee, John C.; Laydon, Jeffrey T.; Bhatnagar, Pradip K.  
CORPORATE SOURCE: Dep. Peptidomimetic Res., SmithKline Beecham Pharm., King of Prussia, PA, 19460, USA  
SOURCE: Pept.: Chem. Biol., Proc. Am. Pept. Symp., 12th (1992), Meeting Date 1991, 454-5. Editor(s): Smith, John A.; Rivier, Jean E.  
ESCOM: Leiden, Neth.  
CODEN: 57XGA9  
DOCUMENT TYPE: Conference  
LANGUAGE: English  
AB The 1-10 and 95-106 peptide fragments of granulocyte-colony stimulating factor (g-CSF) were tested for agonist and antagonist activity. The 1-10, 95-106(Ala97), and 95-106(Ala101) fragments had no antagonist activity, whereas the 95-106(N-N dimer), 95-106(C-C dimer), 1-10 N/95-106C dimer, and 95-106(loop) had some antagonist activity, the 95-106 fragment had

moderate activity, and the 1-10(N-N dimer) had the greatest antagonist activity. However, when either the 1-10 or 95-106 fragment was conjugated with keyhole limpet hemocyanin or ovalbumin they acted as g-CSF agonists.

IT **143433-68-5D**, protein conjugates

RL: BIOL (Biological study)

(granulocyte-colony stimulating factor agonist activity of)

IT **143433-68-5**

RL: BIOL (Biological study)

(granulocyte-colony stimulating factor antagonist activity of)

L4 ANSWER 33 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1991:512651 HCAPLUS

DOCUMENT NUMBER: 115:112651

TITLE: Peptides for induction of cytotoxin T-cell activation for prophylaxis and therapy of acquired immunodeficiency syndrome

INVENTOR(S): Arlinghaus, Ralph B.

PATENT ASSIGNEE(S): University of Texas System, USA

SOURCE: PCT Int. Appl., 84 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9104045	A1	19910404	WO 1990-US5391	19900920
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
US 5128319	A	19920707	US 1989-410727	19890920
CA 2065402	AA	19910321	CA 1990-2065402	19900920
EP 491861	A1	19920701	EP 1990-914985	19900920
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
JP 05500517	T2	19930204	JP 1990-514054	19900920
US 2002151678	A1	20021017	US 2001-911838	20010724
PRIORITY APPLN. INFO.:				
			US 1989-410727	A 19890920
			US 1987-90646	B2 19870828
			WO 1990-US5391	W 19900920
			US 1992-834923	A1 19920213

AB Peptide multimers, consisting of peptides having .apprx.7-30 amino acid residues corresponding to a portion of a conserved domain of a core protein or gp160 envelope protein of human immunodeficiency virus (HIV), are used in an aq. compn. to immunize an immunocompetent animal and have the capacity to induce cytotoxic T-cell activation to the HIV protein but lack the capacity to induce antibodies that immunoreact with the native HIV protein. The multimers are formed by bonding the peptides through oxidized cysteine residues at the termini of the peptides. Alternatively, the peptides form micelles after reaction of a C12-18 fatty acid with the .alpha.- and .epsilon.-amino groups of an amino-terminal lysyl residue of a peptide spacer added to the amino-terminus of the peptides. Activated cytotoxic T-cells are used to kill target cells that exhibit an HIV protein or peptide on their cell surfaces. Five peptides in their disulfide polymeric form were very good immunogens for eliciting a strong T-cell response directed against both the corresponding peptide and the native gp160. These peptides did not stimulate anti-peptide antibody prodn.

IT **124859-55-8**

RL: BIOL (Biological study)



(peptide of conserved domain of AIDS virus core protein, multimer contg., for induction of cytotoxic T-cell activation for AIDS therapy)

L4 ANSWER 34 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1991:159650 HCAPLUS  
DOCUMENT NUMBER: 114:159650  
TITLE: A quenched fluorescent substrate for thimet peptidase containing a new fluorescent amino acid, DL-2-amino-3-(7-methoxy-4-coumaryl)propionic acid  
AUTHOR(S): Knight, C. Graham  
CORPORATE SOURCE: Dep. Biochem., Strangeways Res. Lab., Cambridge, CB1 4RN, UK  
SOURCE: Biochemical Journal (1991), 274(1), 45-8  
CODEN: BIJOAK; ISSN: 0306-3275  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB DL-2-Amino-3-(7-methoxy-4-coumaryl)propionic acid, a new fluorescent amino acid (abbreviated to Amp), has been synthesized to provide an alternative to tryptophan in quenched fluorescent peptide substrates for peptidases. The model compd. Ac-DL-Amp-NH<sub>2</sub> was intensely fluorescent with an excitation max. at 328 nm and an emission max. at 392 nm. Fmoc (fluoren-9-ylmethoxycarbonyl)-DL-Amp was made to allow the solid-phase synthesis of Amp-contg. peptides by the Fmoc-polyamide method. The peptide deriv. Dnp (2,4-dinitrophenyl)-Pro-Leu-Gly-Pro-DL-Amp-D-Lys was cleaved by thimet peptidase at the Leu-Gly bond, with a 20-fold enhancement of fluorescence. The value of k<sub>cat</sub>/K<sub>m</sub> for thimet peptidase was 6.7 .times. 10<sup>5</sup> M<sup>-1</sup> s<sup>-1</sup>, compared with the value of 2.4 .times. 10<sup>5</sup> M<sup>-1</sup> s<sup>-1</sup> for the tryptophan-contg. analog, Dnp-Pro-Leu-Gly-Pro-Trp-D-Lys.

IT 133083-35-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and thimet peptidase hydrolysis of)

L4 ANSWER 35 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1990:115491 HCAPLUS  
DOCUMENT NUMBER: 112:115491  
TITLE: Hydrolysis of the Leu-Gly bond of phenylazobenzoyloxycarbonyl-L-Pro-L-Leu-Gly-L-Pro-D-Arg (a substrate of microbial collagenases) by treponemes isolated from the subgingival plaque of periodontitis patients  
AUTHOR(S): Makinen, Kauko K.; Syed, Salam A.; Salvador, Sergio L.; Makinen, Pirkko Liisa  
CORPORATE SOURCE: Sch. Dent., Univ. Michigan, Ann Arbor, MI, 48109-1078, USA  
SOURCE: Current Microbiology (1990), 20(1), 69-74  
CODEN: CUMIDD; ISSN: 0343-8651  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Cell exts. prepd. from several oral treponemes isolated from the subgingival plaque of periodontitis patients showed high enzyme activity toward phenylazobenzyl-oxycarbonyl-L-prolyl-L-leucylglycyl-L-prolyl-D-arginine (a compd. used as a substrate for microbial collagenases). One major enzyme hydrolyzing this substrate at the Leu-Gly bond only was partially purified from an unspciated treponeme (strain US), Treponema denticola ATCD 35405, and 29 different clin. isolates of T. denticola. The Treponema US enzyme also hydrolyzed furylacryloyl-L-leucylglycyl-L-prolyl-L-alanine (another substrate of bacterial collagenases) at the Leu-Gly bond. This enzyme also hydrolyzed various collagen-derived

peptides. These treponemal proteases were sensitive to metal chelators and p-chloromercury compds. The results indicate that human oral treponemes contain enzymes that readily hydrolyze in chromogenic protease substrates the Leu-Gly bond only that is the cleavage site of these substrates also by true microbial collagenases.

IT 78832-65-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrolysis of, by oral Treponema, collagenase in)

L4 ANSWER 36 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1990:62598 HCAPLUS  
DOCUMENT NUMBER: 112:62598  
TITLE: Prophylaxis and therapy of AIDS, using a  
peptide-containing vaccine  
INVENTOR(S): Arlinghaus, Ralph B.  
PATENT ASSIGNEE(S): University of Texas System, USA  
SOURCE: PCT Int. Appl., 36 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 4  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8902277	A2	19890323	WO 1988-US2970	19880826
WO 8902277	A3	19890518		
W:	AT, AU, BB, BG, BR, CH, DE, DK, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, RO, SD, SE, SU			
RW:	AT, BE, BJ, CF, CG, CH, CM, DE, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG			
AU 8929148	A1	19890417	AU 1989-29148	19880826
US 2002151678	A1	20021017	US 2001-911838	20010724
PRIORITY APPLN. INFO.:			US 1987-90646	A 19870828
			WO 1988-US2970	A 19880826
			US 1989-410727	A3 19890920
			US 1992-834923	A1 19920213

AB A process is given for inducing resistance of an individual to infection by HIV (human immunodeficiency virus). The process involves vaccinating the individual with a synthetic peptide or mixt. of peptides. The synthetic peptide(s) comprises an amino acid sequence derived at least in part from HIV envelope protein conserved region. Upon antigenic presentation to an animal, this peptide induces directed cell-mediated immunity (i.e., T-cell cytotoxicity) to a substantially greater extent than prodn. of antibody directed against native HIV is elicited. The vaccine of the present invention comprises a synthetic peptide having an amino acid sequence derived in part from T-cell epitopes of HIV envelope protein conserved region and preferably consists exclusively of T-cell epitopes. The peptides may be synthesized by conventional solid- or liq.-phase methods or by recombinant DNA techniques (no data).

IT 124859-55-8

RL: BIOL (Biological study)  
(of human immunodeficiency virus envelope protein conserved region, vaccine contg., for AIDS treatment)

L4 ANSWER 37 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1988:524938 HCAPLUS  
DOCUMENT NUMBER: 109:124938  
TITLE: Preparation by direct metal exchange and kinetic study

of active site metal substituted class I and class II  
Clostridium histolyticum collagenases

AUTHOR(S): Angleton, Eddie L.; Van Wart, Harold E.  
CORPORATE SOURCE: Inst. Mol. Biophys., Florida State Univ., Tallahassee,  
FL, 32306, USA  
SOURCE: Biochemistry (1988), 27(19), 7413-18  
CODEN: BICHAW; ISSN: 0006-2960  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Active site metal substitutions for the Zn-contg. .gamma.- and  
.zeta.-collagenases from C. histolyticum were made by direct metal  
exchange. The incubation of Co(II), Cu(II), Ni(II), Cd(II), and Hg(II)  
with the native collagenases resulted in changes in activity that  
paralleled those obsd. for the reconstitution of the resp. apoenzymes with  
these metal ions. For both collagenases, the exchange reactions with  
Co(II) and Cu(II) were complete within 1 min. However, the changes in  
activity obsd. on addn. of Ni(II), Cd(II), and Hg(II) to  
.gamma.-collagenase and Cd(II) and Hg(II) to .zeta.-collagenase were  
time-dependent. The kinetic parameters, kcat and Km, were detd. for each  
of the active metal-substituted species. The substitution of the  
active-site metal ion in .gamma.-collagenase changed both the kcat and Km,  
whereas the effect obsd. in .zeta.-collagenase was primarily on the Km.  
This suggests that there are differences in the mechanisms of these 2  
collagenases, at least with respect to the role of Zn(II) in catalysis.

IT 78832-65-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with .gamma.- and .zeta.-collagenases of Clostridium  
histolyticum, kinetics of)

L4 ANSWER 38 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1988:402885 HCAPLUS  
DOCUMENT NUMBER: 109:2885  
TITLE: Ketone-substrate analogues of Clostridium histolyticum  
collagenases: tight-binding transition-state analogue  
inhibitors

AUTHOR(S): Mookhtiar, Kasim A.; Grobelny, Damian; Galardy,  
Richard E.; Van Wart, Harold E.  
CORPORATE SOURCE: Inst. Mol. Biophys., Florida State Univ., Tallahassee,  
FL, 32306, USA  
SOURCE: Biochemistry (1988), 27(12), 4299-304  
CODEN: BICHAW; ISSN: 0006-2960  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB A series of ketone substrate analogs was synthesized for the 2 classes of  
collagenases from C. histolyticum and shown to be competitive inhibitors.  
These compds. had sequences that matched those of specific peptide  
substrates for these enzymes. The best inhibitor was the ketone analog of  
cinnamoyl-Leu-Gly-Pro-Pro, which had a Ki of 18 nM for  
.epsilon.-collagenase, a class II enzyme. This was the tightest binding  
inhibitor reported for any collagenase to date. Plots of log Ki for the  
inhibitors vs. log KM/kcat (where kcat = catalytic const.) for the matched  
substrates for both collagenases were linear with slopes near unity,  
indicating that the ketones are transition-state analogs. This strongly  
implies that the ketone C atoms of these inhibitors are tetrahedral when  
bound to the enzymes.

IT 96595-84-5 96596-31-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with collagenases of Clostridium histolyticum, kinetics  
of)

L4 ANSWER 39 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1988:218111 HCAPLUS  
DOCUMENT NUMBER: 108:218111  
TITLE: New thiol inhibitors of Clostridium histolyticum collagenase. Importance of the P3' position  
AUTHOR(S): Yiotakis, Athanasios; Hatgiyannacou, Athina; Dive, Vincent; Toma, Flavio  
CORPORATE SOURCE: Lab. Org. Chem., Univ. Athens, Athens, Greece  
SOURCE: European Journal of Biochemistry (1988), 172(3), 761-6  
CODEN: EJBCAI; ISSN: 0014-2956  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB An extensive series of synthetic mercaptotripeptides (HS-CH<sub>2</sub>-CH<sub>2</sub>-CO-Pro-Yaa, where Yaa is in amino acid) was prep'd., and the K<sub>i</sub> values were det'd. on the C. histolyticum collagenase. Among the factors which control the optimal binding of these inhibitors, the presence of a free C-terminal carboxylate group in the position P3' of the comp'ds. is of primary importance. In general, the esterification of this carboxylate group decreased the potency of the inhibitors by 2 orders of magnitude. Also the enzyme favored the inhibitors having a long linear apolar or basic side-chain at position P3'. These data suggest a large S3' subsite of the C. histolyticum collagenase. The comp'd. which contains a homoarginine residue at the P3' position, proved to be the most potent synthetic inhibitor known to date for the C. histolyticum collagenase, with a K<sub>i</sub> of 0.2 .mu.M.

IT 78832-65-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with collagenase of Clostridium histolyticum, kinetics of)

L4 ANSWER 40 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1988:200828 HCAPLUS  
DOCUMENT NUMBER: 108:200828  
TITLE: A monoclonal antibody recognizing the site of limited proteolysis of protein kinase C. Inhibition of down-regulation in vivo  
AUTHOR(S): Young, Susan; Rothbard, Johnathan; Parker, Peter J.  
CORPORATE SOURCE: Imp. Cancer Res. Fund, London, UK  
SOURCE: European Journal of Biochemistry (1988), 173(1), 247-52  
CODEN: EJBCAI; ISSN: 0014-2956  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB A monoclonal antibody to protein kinase C (I) is described that recognizes the site of limited proteolysis on the native enzyme. The binding of the antibody to the purified I in vitro blocked partial proteolysis by trypsin, and introduction of the Fab fragment into a rodent glioma cell line inhibited phorbol ester-induced down-regulation of I. These observations were discussed in the context of the domain structure of I and the agonist-induced proteolysis of I in vivo.

IT 114454-63-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L4 ANSWER 41 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1987:591131 HCAPLUS  
DOCUMENT NUMBER: 107:191131  
TITLE: QSAR for peptide bioactivities. Further studies

AUTHOR(S): Charton, M.; Charton, B. I.  
CORPORATE SOURCE: Chem. Dep., Pratt Inst., Brooklyn, NY, 11205, USA  
SOURCE: Pharmacochemistry Library (1987), 10(QSAR Drug Des. Toxicol.), 285-90  
CODEN: PHLIDQ; ISSN: 0165-7208  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The biol. activities of several sets of enkephalin analogs were successfully correlated with their structural variations by using the intermol. force (IMF) equation which accounts for properties such as polarizability, H bonding, side chain charge, and steric parameters. The results support the validity of the IMF equation as a general method for the quant. description of biol. activity as a function of structure.  
IT 111110-11-3 111110-12-4 111110-30-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrolysis of, by .beta.-collagenase, structure in relation to)

L4 ANSWER 42 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1986:621504 HCAPLUS  
DOCUMENT NUMBER: 105:221504  
TITLE: New thiol inhibitor of Achromobacter iophagus collagenase. Specificity of the enzyme's S3' subsite  
AUTHOR(S): Yiotakis, Athanasios; Dive, Vincent  
CORPORATE SOURCE: Dep. Biol., Cent. Etud. Nucl. Saclay, Gif-sur-Yvette, F-91191, Fr.  
SOURCE: European Journal of Biochemistry (1986), 160(2), 413-18  
CODEN: EJBCAI; ISSN: 0014-2956  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB New synthetic mercaptotripeptides (HS-CH2-CH2-CO-Pro-Yaa) [Yaa (P3' position) = alanine, leucine, phenylalanine, proline, or hydroxyproline] which inhibit A. iophagus collagenase were produced to obtain more powerful bacterial collagenase inhibitors than currently available and to investigate the specificity of the S3' subsite of the enzyme. Since similar binding consts. were found for inhibitors carrying uncharged residues of various sizes in the P3' position, steric hindrance at the collagenase S3' appears relatively limited. HS-CH2-CH2-CO-Pro-Arg had a Ki of 0.5 .mu.M for the enzyme and was the strongest inhibitor so far reported in the literature. The weakest in the present series was HS-CH2-CH2-CO-Pro-Asp, which had a Ki of 70 .mu.M. Thus, the charged groups in the P3' position play a key role in the interaction of the inhibitors with the enzyme.  
IT 78832-65-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with collagenase of Achromobacter iophagus, kinetics of)

L4 ANSWER 43 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1985:592081 HCAPLUS  
DOCUMENT NUMBER: 103:192081  
TITLE: Complementary substrate specificities of class I and class II collagenases from Clostridium histolyticum  
AUTHOR(S): Van Wart, Harold E.; Steinbrink, D. Randall  
CORPORATE SOURCE: Dep. Chem., Florida State Univ., Tallahassee, FL, 32306, USA  
SOURCE: Biochemistry (1985), 24(23), 6520-6  
CODEN: BICHAW; ISSN: 0006-2960  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The substrate specificities of 3 class I (.beta., .gamma., and .eta.) and 3 class II (.delta., .epsilon., and .xi.) collagenases from *C. histolyticum* were investigated by quantitating the  $k_{cat}/K_m$  values ( $k_{cat}$  is the catalytic const.) for the hydrolysis of 53 synthetic peptides with collagen-like sequences covering the P3 through P3' subsites of the substrate. For both classes of collagenases, there was a strong preference for glycine in subsites P1' and P3. All 6 enzymes also preferred substrates that contained proline or alanine in subsites P2 and P2' and hydroxyproline, alanine, or arginine in subsite P3'. This agreed well with the occupancies of these sites by these residues in type I collagen. However, peptides with glutamate in subsites P2 or P2' were not good substrates, even though glutamate occurs frequently in these positions in collagen. Conversely, all 6 enzymes preferred arom. amino acids in subsite P1, even though such residues do not occur in this position in type I collagen. In general, the class II enzymes had a broader specificity than the class I enzymes. However, they were much less active toward sequences contg. hydroxyproline in subsites P1 and P3'. Thus, the 2 classes of collagenases have similar but complementary sequence specificities. This accounts for the ability of the 2 classes of enzymes to synergistically digest collagen.

IT 78832-65-2 96595-84-5 96596-31-5

RL: BIOL (Biological study)

(collagenase multiple forms of *Clostridium histolyticum* specificity for)

L4 ANSWER 44 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1985:418900 HCAPLUS

DOCUMENT NUMBER: 103:18900

TITLE: *Clostridium histolyticum* collagenase: development of new thio ester, fluorogenic, and depsipeptide substrates and new inhibitors

AUTHOR(S): Vencill, Charles F.; Rasnick, David; Crumley, Katherine V.; Nishino, Norikazu; Powers, James C.

CORPORATE SOURCE: Sch. Chem., Georgia Inst. Technol., Atlanta, GA, 30332, USA

SOURCE: Biochemistry (1985), 24(13), 3149-57

CODEN: BICHAW; ISSN: 0006-2960

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new series of thio ester, depsipeptide, and peptide substrates was synthesized for *C. histolyticum* collagenase. The hydrolysis of the depsipeptide substrate was followed on a pH stat, and thio ester hydrolysis was measured by inclusion of the chromogenic thiol reagent 4,4'-dithiodipyridine in the assay mixt. The best thio ester substrate, Boc-Abz-Gly-Pro-Leu-SCH<sub>2</sub>CO-Pro-Nba (Boc = tert-butyloxycarbonyl; Nba = 4-nitrobenzylamide; Abz = 2-aminobenzoyl), had a catalytic const. ( $k_{cat}$ )/ $K_m$  of 63,000 M<sup>-1</sup> s<sup>-1</sup>, whereas several shorter thio ester sequences were inactive as substrates. In general, the peptide analogs of all of the reactive thio ester substrates were hydrolyzed 5-10-fold faster by collagenase. In one case (Z-Gly-Pro-Leu-Gly-Pro-NH<sub>2</sub>) (Z = benzyloxycarbonyl) where a comparison was made, the peptide substrate was resp. 10- and 100-fold more readily hydrolyzed than the corresponding thio ester and ester substrates. Cleavages of the 2 fluorescence-quench substrates Abz-Gly-Pro-Leu-Gly-Pro-Nba and Abz-Gly-Pro-Leu-SCH<sub>2</sub>CO-Pro-Nba could be easily followed fluorogenically since a 5-10-fold increase in fluorescence occurred upon hydrolysis. The fluorescent peptide substrate is the best synthetic substrate known for *C. histolyticum* collagenase with a  $k_{cat}/K_m$  of 490,000 M<sup>-1</sup> s<sup>-1</sup>. A series of new reversible inhibitors were developed by the attachment of Zn-ligating groups (hydroxamic acid,

carboxymethyl, and thiol) to various peptide sequences specific for C. histolyticum collagenase. The shorter peptides designed to bond to either the P3-P1 or P1'-P3' subsites were poor to moderate inhibitors. The thiol HSCH2CH2CO-Pro-Nba had the lowest  $K_i$  (0.02 mM). Elongation of N-hydroxy peptide sequences to interact with the P3-P3' subsites of the enzyme failed to yield better inhibitors. None of the potential irreversible inhibitor structures, which contained ClCH2CO- or CH2:CH-CO- groups attached to peptides, proved to be effective.

IT 96194-15-9

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with collagenase of Clostridium histolyticum, kinetics of)

L4 ANSWER 45 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1985:217337 HCAPLUS

DOCUMENT NUMBER: 102:217337

TITLE: Substrate specificity of .beta.-collagenase from Clostridium histolyticum

AUTHOR(S): Steinbrink, D. Randall; Bond, Michael D.; Van Wart, Harold E.

CORPORATE SOURCE: Dep. Chem., Florida State Univ., Tallahassee, FL, 32306, USA

SOURCE: Journal of Biological Chemistry (1985), 260(5), 2771-6  
CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The substrate specificity of .beta.-collagenase of C. histolyticum was investigated by measuring the rate of hydrolysis of >50 tri-, tetra-, penta-, and hexapeptides covering the P3 to P3' subsites of the substrate. The choice of peptides was patterned after sequences found in the .alpha.1 and .alpha.2 chains of type I collagen. Each peptide contained either a 2-furanacryloyl (FA) or cinnamoyl (CN) group in subsite P2 or the 4-nitrophenylalanine (Nph) residue in subsite P1. Hydrolysis of the P1-P1' bond produced an absorbance change in these chromophoric peptides that was used to quantitate the rates of their hydrolysis under 1st-order conditions ([S] .mchlt. Km) from which catalytic const. (kcat)/Km values were obtained. The identity of the amino acids in all 6 subsites (P3-P3') markedly influenced the hydrolysis rates. In general, the best substrates had glycine in subsites P3 and P1', proline or alanine in subsite P2' and hydroxyproline, arginine, or alanine in subsite P3'. This corresponded well with the frequency of occurrence of these residues in the Gly-X-Y triplets of collagen. In contrast, the most rapidly hydrolyzed substrates did not have residues from collagen-like sequences in subsites P2 and P1. CN-Nph-Gly-Pro-Ala (CN = cinnamoyl; Nph = 4-nitrophenylalanine) was the best known substrate for .beta.-collagenase with a kcat/Km of 4.4 .times. 107 M-1 min-1, in spite of the fact that there was neither hydroxyproline, arginine, or alanine in P1. These results indicated that the previously established rules for the substrate specificity of the enzyme require modification.

IT 96596-39-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(deprotection of)

IT 78832-65-2P 96595-84-5P 96596-31-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and .beta.-collagenase of Clostridium histolyticum specificity for)

IT 96596-40-6

RL: RCT (Reactant); RACT (Reactant or reagent)  
(sapon. of)



L4 ANSWER 46 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1984:402780 HCAPLUS

DOCUMENT NUMBER: 101:2780

TITLE: Characterization of the individual collagenases from *Clostridium histolyticum*

AUTHOR(S): Bond, Michael D.; Van Wart, Harold E.

CORPORATE SOURCE: Inst. Mol. Biophys., Florida State Univ., Tallahassee, FL, 32306, USA

SOURCE: Biochemistry (1984), 23(13), 3085-91

CODEN: BICHAW; ISSN: 0006-2960

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Six collagenases (.alpha., .beta., .gamma., .delta., .epsilon., and .zeta.) purified from *C. histolyticum* were characterized in detail. The mol. wts. detd. by SDS-polyacrylamide gel electrophoresis ranged from 68,000 to 125,000. Isoelec. focusing expts. demonstrated that the pI values of the collagenases were in the 5.35-6.20 range. These expts. also revealed that the subspecies of .alpha.- and .gamma.-collagenases (.alpha.1 vs. .alpha.2 and .gamma.1 vs. .gamma.2) had different pI values, but the same mol. wts. Microheterogeneity was also obsd. for the .beta.- and .epsilon.-collagenases. The amino acid compns. of all 6 collagenases were detd., and anal. for neutral sugars and hexosamines showed that none of the enzymes had a significant carbohydrate content. Zn and Ca were the only metals that copurified with the collagenases. The purified enzymes contained .apprx.1 mol Zn/mol protein and a Ca content that varied from .apprx.2 mol/mol for .alpha.-collagenase to .apprx.7 mol/mol for .beta.-collagenase. All of the collagenases are 5-10-fold more active against gelatin than collagen. The .alpha.-, .beta.-, and .gamma.-collagenases were significantly less active toward the synthetic peptide substrates examd. than the .delta.-, .epsilon.-, and .zeta.-collagenases. This property, taken together with data on the stabilities and amino acid compns. of these enzymes, strongly supported their assignment to 2 distinct classes. This established clearly that *C. histolyticum* does, indeed, produce >1 different type of collagenase.

IT 78832-65-2

RL: BIOL (Biological study)

(collagenase multiple forms of *Clostridium* specificity for, classification in relation to)

L4 ANSWER 47 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1984:402779 HCAPLUS

DOCUMENT NUMBER: 101:2779

TITLE: Purification and separation of individual collagenases of *Clostridium histolyticum* using red dye ligand chromatography

AUTHOR(S): Bond, Michael D.; Van Wart, Harold E.

CORPORATE SOURCE: Inst. Mol. Biophys., Florida State Univ., Tallahassee, FL, 32306, USA

SOURCE: Biochemistry (1984), 23(13), 3077-85

CODEN: BICHAW; ISSN: 0006-2960

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Six collagenases present in the culture filtrate of *C. histolyticum* were purified to homogeneity. Chromatog. on hydroxylapatite, Sephacryl S-200, and L-arginine-Affi-Gel 202 removed the brown pigment and the great majority of the contaminating proteinases active against casein, benzoyl-L-arginine Et ester, and elastin. Reactive Red 120 dye ligand chromatog. subdivided the collagenases, which had very similar

physicochem. properties, among 4 fractions. The final purifn. was achieved by chromatog. over DEAE-cellulose and SP-Sephadex. All 6 collagenases, designated .alpha., .beta., .gamma., .delta., .epsilon., and .zeta. by the order of their purifn., were highly active against collagen and devoid of other proteolytic activities. Each exhibited a single band on SDS-polyacrylamide gels. Two distinct subspecies of the .alpha. and .gamma. enzymes were isolated, which had the same mol. wt. and activity, but different pI values. There was some less pronounced microheterogeneity for the other collagenases. On the basis of their activities toward native collagen and the synthetic peptide 2-furanacryloyl-L-leucylglycyl-L-prolyl-L-alanine (FALGPA), the 6 collagenases were divided into 2 classes. Class I collagenases (.alpha., .beta., and .gamma.) had high collagenase activity and moderate FALGPA activity, whereas the class II collagenases (.delta., .epsilon., and .zeta.) had moderate collagenase and high FALGPA activities. The relation between these 6 collagenases and others reported to have been isolated in the literature was also examd.

IT 78832-65-2

RL: BIOL (Biological study)

(collagenase multiple forms of Clostridium specificity for,  
classification in relation to)

L4 ANSWER 48 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1983:518322 HCAPLUS

DOCUMENT NUMBER: 99:118322

TITLE: Inhibition of the collagenase from Clostridium histolyticum by phosphoric and phosphonic amides

AUTHOR(S): Galardy, Richard E.; Grobelny, Damian

CORPORATE SOURCE: Sanders-Brown Res. Cent. Aging, Univ. Kentucky, Lexington, KY, 40536, USA

SOURCE: Biochemistry (1983), 22(19), 4556-61

CODEN: BICHAW; ISSN: 0006-2960

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Di- and tripeptides with sequences present in collagen that are known to occupy the S1' through S3' subsites at the active site of the collagenase from C. histolyticum do not themselves inhibit this Zn-contg. protease. Thus, Gly-Pro, Gly-Pro-Ala, and their C-terminal amides are not inhibitors. N.alpha.-Phosphoryl-Gly-Pro, N.alpha.-phosphoryl-Gly-L-Pro-L-Ala, and their C-terminal amides are weak inhibitors with IC50 values (concn. causing half-maximal inhibition) of 4.6, 0.8, 3, and 1.5 mM, resp. Extension of Gly-L-Pro-L-Ala to L-Leu-Gly-L-Pro-L-Ala gives a tetrapeptide known to occupy the S1, S1', S2', and S3' subsites of collagenase when present in collagen, but that still does not itself inhibit the enzyme. (Isoamylphosphonyl)Gly-L-Pro-L-Ala, a peptide contg. a tetrahedral P atom at the position of the amide carbonyl C atom of the L-Leu-Gly amide bond of the parent tetrapeptide, inhibits collagenase with an IC50 of 16 .mu.M, .gtoreq.1000-fold more potent than the parent peptide. Substitution of the 2-C Et chain of alanine for the 5-C isoamyl chain of leucine increases the IC50 to 46 .mu.M. Substitution of the n-decyl chain for the isoamyl chain does not change the IC50. (Isoamylphosphonyl)Gly-Gly-L-Pro contains a tripeptide that does not occupy the S1' through S3' subsites of collagenase when this peptide is present in collagen and thus has an IC50 of 4.4 mM. (Isoamylphosphonyl)Gly-L-Pro-L-Ala may be an analog of the tetrahedral transition state for the hydrolysis of the natural collagen substrate. However, the IC50 of this inhibitor is 3-4 orders of magnitude higher than those of the best P-contg. transition-state analogs of other Zn-contg. proteases. In addn., this inhibitor lacks specificity for its target, having a Ki for angiotensin-converting enzyme of 11 .mu.M, about

equal to its IC50 for collagenase.

IT **86563-79-3P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. and angiotensin-converting enzyme inhibition by)

IT **86563-77-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L4 ANSWER 49 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1982:577203 HCAPLUS

DOCUMENT NUMBER: 97:177203

TITLE: Conformational preferences of amino acid side chains  
in collagen

AUTHOR(S): Nemethy, George; Scheraga, Harold A.

CORPORATE SOURCE: Baker Lab. Chem., Cornell Univ., Ithaca, NY, 14853,  
USA

SOURCE: Biopolymers (1982), 21(8), 1535-55

CODEN: BIPMAA; ISSN: 0006-3525

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Conformation energy computations were carried out on collagen-like triple-stranded conformations of several poly(tripeptide)s with the general structure  $\text{CH}_3\text{CO}-(\text{Gly-X-Y})_3-\text{NHCH}_3$ . The sequences considered had various amino acid residues in position X or Y of the central tripeptide, with either proline (Pro) or alanine as a neighbor, i.e., Gly-X-Pro, Gly-X-Ala, Gly-Pro-Y, and Gly-Ala-Y. Min. energy conformations were computed for the side chains, and their distributions were compared for the 4 sequences. The residues used were  $\alpha$ -aminobutyric acid (Abu), leucine, phenylalanine, serine, aspartate (Asp), asparagine (Asn), valine, isoleucine, and threonine. The conformational energy of a  $-\text{CH}_2-\text{CH}_3$  side chain in Abu was mapped as a function of the dihedral angle. Intrastrand interactions with neighboring residues do not affect the conformations of a side chain in position Y, and they have a minor effect on it in the X-Ala sequence, but they strongly restrict the conformational freedom of the side chain in the X-Pro sequence. Conversely, interstrand interactions do not affect side chains in position X, but they strongly restrict the conformational freedom of a side chain in position Y if there is a nearby Pro residue in a neighboring strand. H bonds with the backbone can be formed in some conformations of long polar side chains, such as Asp, Asn, or glutamine. All amino acid residues can be accommodated in collagen. Because of the interactions mentioned above, steric and energetic constraints can be correlated with obsd. preferences of certain amino acids for positions X or Y in collagen. Hence, there preferences may be explained, in part, in terms of differences in the conformational freedom of the side chains in the triple-stranded structure.

IT **83387-70-6**

RL: BIOL (Biological study)  
(conformation preference of triple-stranded)

L4 ANSWER 50 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1981:492793 HCAPLUS

DOCUMENT NUMBER: 95:92793

TITLE: A continuous spectrophotometric assay for *Clostridium histolyticum* collagenase

AUTHOR(S): Van Wart, Harold E.; Randall Steinbrink, D.

CORPORATE SOURCE: Dep. Chem., Florida State Univ., Tallahassee, FL,

32306, USA  
SOURCE: Analytical Biochemistry (1981), 113(2), 356-65  
CODEN: ANBCA2; ISSN: 0003-2697  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB A continuously recording spectrophotometric assay for *C. histolyticum* collagenase with 2-furanacryloyl-L-leucylglycyl-L-prolyl-L-alanine (I) as substrate was developed. The hydrolysis of this peptide by collagenase obeys Michaelis-Menten kinetics with a  $V_{max}$  of 1.8 .times. 105 .mu.katal/kg and a  $K_m$  of 0.5 mM. I is hydrolyzed more rapidly by collagenase than any other commonly used synthetic substrate, but is not cleaved by any of the well-known proteinases, such as trypsin, thermolysin, or elastase. The assay itself is rapid, convenient, and sensitive, and should greatly facilitate detailed kinetic studies of collagenase.  
IT **78832-65-2**  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with collagenase, kinetics of)  
L4 ANSWER 51 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1975:156705 HCAPLUS  
DOCUMENT NUMBER: 82:156705  
TITLE: Preparation and mass spectra of azulene peptides and their use for the analysis of synthetic peptides  
AUTHOR(S): Jaeger, Ernst; Wuensch, Erich  
CORPORATE SOURCE: Max-Planck-Inst. Eiweiss Lederforsch., Munich, Fed. Rep. Ger.  
SOURCE: Prog. Pept. Res., [Proc. Am. Pept. Symp.], 2nd (1972), Meeting Date 1970, 151-8. Editor(s): Lande, Saul. Gordon and Breach: New York, N. Y.  
CODEN: 29USAB  
DOCUMENT TYPE: Conference  
LANGUAGE: English  
GI For diagram(s), see printed CA Issue.  
AB The amino protective group, (7-isopropyl-1-methyl-4-azulyl)acetyl (MIAA), facilitated sepn. of peptides by extn. and thin-layer chromatog. and allowed a quant. and qual. detn. of the peptide by photometric and mass spectral anal. Coupling 7-isopropyl-1-methyl-4-azuleneacetic acid (I) with L-proline Me ester in  $CH_2Cl_2$  and dicyclohexylcarbodiimide gave the Me ester of II. Leu-Gly-Pro-Ala-OMe was coupled with II to give MIAA-Pro-Leu-Gly-Pro-Ala-OMe, which was volatile in a mass spectrometer between 80.degree. and 220.degree..  
IT **55260-05-4**  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(peptide coupling reactions of, with isopropylmethylazulylacetyl blocked amino acids)  
IT **35866-17-2 55260-03-2 55260-04-3**  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. absorption and mass spectrum of)  
L4 ANSWER 52 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1972:458236 HCAPLUS  
DOCUMENT NUMBER: 77:58236  
TITLE: Specificity of bacterial collagenase. Studies with peptides newly synthesized using the solid-phase method  
AUTHOR(S): Soberano, Mercedes E.; Schoellmann, Guenther  
CORPORATE SOURCE: Sch. Med., Tulane Univ., New Orleans, LA, USA  
SOURCE: Biochimica et Biophysica Acta (1972), 271(1), 133-44

CODEN: BBACAQ; ISSN: 0006-3002

DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The method of solid-phase synthesis was followed in the prepn. of 7 new oligopeptides which were used to study the specificity requirements of clostridiopeptidase A (EC 3.4.4.19). The newly synthesized peptides were structural and stereochem. modifications of the collagen-like sequence -Pro-X-Gly-Pro-Y-. It was shown that with the enzyme prepn. used, the Y-Gly bond in sequences like -Gly-X-Y-Gly-Pro-Z- or -Gly-X-Y-Gly-Z-Pro- can be cleaved. This obsd. lack of specificity might be due to the presence of a collagenase with a broader specificity in the prepn. utilized in this study or, alternatively, could be accounted for by an inherent property of the subunit-contg. enzyme which allows the accommodation of some structural variations and shows, therefore, less specificity than originally was proposed.

IT 37058-26-7

RL: BIOL (Biological study)  
(reaction with collagenase)

L4 ANSWER 53 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1972:22421 HCAPLUS

DOCUMENT NUMBER: 76:22421

TITLE: Chromophoric substrates. VIII. Mass spectrometric studies on N-[(azulen-4-yl)acetyl]peptides

AUTHOR(S): Wuensch, Erich; Jaeger, Ernst

CORPORATE SOURCE: Abt. Peptidchem., Max-Planck-Inst.

Eiweiss-Lederforsch., Munich, Fed. Rep. Ger.

SOURCE: Hoppe-Seyler's Zeitschrift fuer Physiologische Chemie (1971), 352(11), 1584-90

CODEN: HSZPAZ; ISSN: 0018-4888

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Azulene chromophoric substrates prove to be particularly appropriate for a precise identification of the chromophore-contg. cleavage products which result from an enzymic hydrolysis: they permit a rapid and unequivocal localization of the enzyme attack. If the substances are rather volatile or made so by esterification, the spectra of N-[(7-isopropyl-1-methylazulen-4-yl)acetyl]amino acid or peptide derivs. show surprisingly intensive mol. ions and rather low fragmentation in the upper mass region. A precise identification of the N-terminal cleavage products is thus possible. The technique is also very useful for an exact and fast examn. of the single reaction steps during the synthesis of such chromophoric substrates.

IT 35866-17-2

RL: PRP (Properties)  
(mass spectrum of)

L4 ANSWER 54 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1972:22399 HCAPLUS

DOCUMENT NUMBER: 76:22399

TITLE: Chromophoric substrates. VII. Specificity of carboxypeptidase B

AUTHOR(S): Wuensch, Erich; Jaeger, Ernst; Schoensteiner-Altman, Gerlinde

CORPORATE SOURCE: Abt. Peptidchem., Max-Planck-Inst.

Eiweiss-Lederforsch., Munich, Fed. Rep. Ger.

SOURCE: Hoppe-Seyler's Zeitschrift fuer Physiologische Chemie (1971), 352(11), 1580-3

CODEN: HSZPAZ; ISSN: 0018-4888

DOCUMENT TYPE: Journal

LANGUAGE: German

AB In liqs. of unknown enzymic compn., chromophoric substrates may apparently be applied reasonably for the detn. of collagenase only if the sequence prevents a degradation from the C-terminus by carboxypeptidase B. The attachment of D-arginine to the C-terminal end of the chromophoric substrates only causes the desired effect if the D-arginine residue is preceded by L-proline. Otherwise the C-terminal D-arginine does not appear to be a reliable protection against an enzymic attack by carboxypeptidase B. The investigation of several test substances showed that the rule of specificity needs an unequivocal fixation for this. exopeptidase.

IT **35764-47-7 35764-48-8 35764-50-2**

RL: BIOL (Biological study)

(reaction with carboxypeptidase B)

L4 ANSWER 55 OF 55 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1972:22397 HCAPLUS

DOCUMENT NUMBER: 76:22397

TITLE: Chromophoric substrates. VI. Specificity of collagenase

AUTHOR(S): Wuensch, Erich; Jaeger, Ernst; Schoensteiner-Altmann, Gerlinde

CORPORATE SOURCE: Abt. Peptidchem., Max-Planck-Inst.

Eiweiss-Lederforsch., Munich, Fed. Rep. Ger.

SOURCE: Hoppe-Seyler's Zeitschrift fuer Physiologische Chemie (1971), 352(11), 1568-79

CODEN: HSZPAZ; ISSN: 0018-4888

DOCUMENT TYPE: Journal

LANGUAGE: German

AB According to previous investigations, the required specificity for the enzyme collagenase was considered to be already given by the sequence -Pro-R-Gly-Pro- in the substrate; the results found earlier during the study of the chromophoric substrates proved that (7-isopropyl-1-methylazulen-4-yl)acetyl-L-propyl-L-leucyl-glycyl-L-prolyl-D-arginine, but not the corresponding -L-arginine deriv. seemed to contrast with this rule of specificity. By changes in the collagenase specific sequence as well as in the neighboring substituents of this sequence, it became obvious that not only the sequence -Pro-R-Gly-Pro-, but also the pair of substituents attached to this sequence, and finally, the total conformation of the substrate, is responsible for the enzymic hydrolysis. In the case of an unfavorable conformation of the substrate cleavages are obsd. which make the rule of specificity known so far questionable.

IT **35752-56-8 35764-48-8**

RL: BIOL (Biological study)

(collagenase response to)

IT **35752-63-7P 35752-64-8P**RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)IT **35764-47-7**

RL: BIOL (Biological study)

(reaction with collagenase)

=&gt; fil reg

FILE 'REGISTRY' ENTERED AT 15:50:34 ON 19 MAR 2003

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DICTIONARY FILE UPDATES: 18 MAR 2003 HIGHEST RN 499968-86-4

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Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d his

(FILE 'HOME' ENTERED AT 15:45:12 ON 19 MAR 2003)

FILE 'REGISTRY' ENTERED AT 15:45:24 ON 19 MAR 2003

L1 12850 S LGPA/SQSP  
L2 409787 S SQL=<10  
L3 76 S L1 AND L2

FILE 'HCAPLUS' ENTERED AT 15:46:56 ON 19 MAR 2003

L4 55 S L3

FILE 'HCAPLUS' ENTERED AT 15:50:01 ON 19 MAR 2003

FILE 'REGISTRY' ENTERED AT 15:50:34 ON 19 MAR 2003

=> s 13

L5 76 L1 AND L2

=> d rn cn lc nte sql kwic can tot 15

L5 ANSWER 1 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 481198-27-0 REGISTRY

CN GenBank AAB20998 (9CI) (CA INDEX NAME)

OTHER NAMES:

CN GenBank AAB20998 (Translated from: GenBank S76125)

SQL 5

SQL 5

SEQ 1 LGPAG

HITS AT: 1-4

L5 ANSWER 2 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 481129-49-1 REGISTRY

CN GenBank AAA66353 (9CI) (CA INDEX NAME)

OTHER NAMES:

CN GenBank AAA66353 (Translated from: GenBank M20922)

SQL 8

SQL 8

Searched by M. Smith

SEQ 1 MTPLGPAS

=====

HITS AT: 4-7

L5 ANSWER 3 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 477562-80-4 REGISTRY

CN L-Leucine, L-lysyl-L-leucylglycyl-L-prolyl-L-alanyl-L-prolyl-L-lysyl-L-threonyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 13: PN: W002094981 SEQID: 199 claimed sequence

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 9

SQL 9

SEQ 1 KLGPAPKTL

=====

HITS AT: 2-5

REFERENCE 1: 138:13498

L5 ANSWER 4 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 473790-15-7 REGISTRY

CN L-Arginine, L-glutaminy-L-leucylglycyl-L-prolyl-L-alanyl-L-glutaminyglycyl-L-.alpha.-aspartyl-L-.alpha.-glutamyl- (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 10

SQL 10

SEQ 1 QLGPAQGDER

=====

HITS AT: 2-5

REFERENCE 1: 137:380979

REFERENCE 2: 137:380977

REFERENCE 3: 137:321378

L5 ANSWER 5 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 473790-14-6 REGISTRY

CN L-Glutamine, L-glutaminy-L-leucyl-L-.alpha.-glutamyl-L-tryptophyl-L-glutaminy-L-leucylglycyl-L-prolyl-L-alanyl- (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 10

SQL 10

SEQ 1 QLEWQLGPAQ

=====

HITS AT: 6-9

REFERENCE 1: 137:321378

L5 ANSWER 6 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 473789-49-0 REGISTRY

CN L-Arginine, L-glutaminy-L-leucylglycyl-L-prolyl-L-alanyl-L-arginylglycyl-L-.alpha.-aspartyl-L-.alpha.-glutamyl- (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS, TOXCENTER



SQL 10  
SQL 10

SEQ 1 QLGPARGDER

=====

HITS AT: 2-5

REFERENCE 1: 137:380979

REFERENCE 2: 137:380977

REFERENCE 3: 137:321378

L5 ANSWER 7 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 473789-00-3 REGISTRY

CN L-Arginine, L-glutaminyl-L-leucyl-L-.alpha.-glutamyl-L-tryptophyl-L-glutaminyl-L-leucylglycyl-L-prolyl-L-alanyl- (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 10  
SQL 10

SEQ 1 QLEWQLGPAR

=====

HITS AT: 6-9

REFERENCE 1: 137:380979

REFERENCE 2: 137:380977

REFERENCE 3: 137:321378

L5 ANSWER 8 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 473327-84-3 REGISTRY

CN L-Alanine, L-glutaminyl-L-leucyl-L-.alpha.-glutamyl-L-tryptophyl-L-glutaminyl-L-leucylglycyl-L-prolyl- (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 9  
SQL 9

SEQ 1 QLEWQLGPA

=====

HITS AT: 6-9

REFERENCE 1: 137:334071

L5 ANSWER 9 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 472959-53-8 REGISTRY

CN L-Lysine, L-threonyl-L-isoleucyl-L-leucylglycyl-L-prolyl-L-alanyl-L-glutaminyl-L-asparaginyll-L-valyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 83: PN: W002080649 SEQID: 83 unclaimed sequence

LC STN Files: CA, CAPLUS

SQL 10  
SQL 10

SEQ 1 TILGPAQNVK

=====

HITS AT: 3-6

REFERENCE 1: 137:305694

L5 ANSWER 10 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 432542-27-3 REGISTRY  
CN Poly(oxy-1,2-ethanediyl), .alpha.-(1-oxo-2-propenyl)-.omega.-[(2,5-dioxo-1-pyrrolidinyl)oxy]-, polymer with glycyglycyl-L-leucylglycyl-L-prolyl-L-alanylglycylglycyl-L-lysine, block (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE homopolymer  
modified (modifications unspecified)

type	location	description
modification	-	undetermined modification

SQL 9

SQL 9

SEQ 1 GGLGPAGGK

====

HITS AT: 3-6

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

RN 432542-27-3 REGISTRY

SEQ 1 GGLGPAGGK

====

HITS AT: 3-6

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

SEQ 1 GGLGPAGGK

====

HITS AT: 3-6

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 137:10877

L5 ANSWER 11 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 432542-26-2 REGISTRY  
CN L-Lysine, glycyglycyl-L-leucylglycyl-L-prolyl-L-alanylglycylglycyl- (9CI)  
(CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
SQL 9  
SQL 9

SEQ 1 GGLGPAGGK

====

HITS AT: 3-6

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 138:126898

L5 ANSWER 12 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 400856-16-8 REGISTRY  
CN Glycine, L-seryl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanylglycyl-L-leucyl-  
(9CI) (CA INDEX NAME)

Searched by M. Smith

LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 9  
SQL 9

SEQ 1 SPLGPAGLG

HITS AT: 3-6

REFERENCE 1: 136:211958

L5 ANSWER 13 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 400855-54-1 REGISTRY  
CN L-Leucine, L-seryl-L-seryl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanylglycyl-  
(9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 9  
SQL 9

SEQ 1 SSPLGPAGL

HITS AT: 4-7

REFERENCE 1: 136:211958

L5 ANSWER 14 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 400855-45-0 REGISTRY  
CN L-Alanine, L-seryl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanylglycyl-L-  
leucylglycyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 10  
SQL 10

SEQ 1 SPLGPAGLGA

HITS AT: 3-6

REFERENCE 1: 136:211958

L5 ANSWER 15 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 400853-95-4 REGISTRY  
CN L-Leucine, glycyl-L-seryl-L-seryl-L-prolyl-L-leucylglycyl-L-prolyl-L-  
alanylglycyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 10  
SQL 10

SEQ 1 GSSPLGPAGL

HITS AT: 5-8

REFERENCE 1: 136:211958

L5 ANSWER 16 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 400853-70-5 REGISTRY  
CN L-Alanine, L-prolyl-L-leucylglycyl-L-prolyl-L-alanylglycyl-L-leucylglycyl-  
(9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 9  
SQL 9

SEQ 1 PLGPAGLGA

=====

HITS AT: 2-5

REFERENCE 1: 136:211958

L5 ANSWER 17 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 400853-42-1 REGISTRY  
CN Glycine, glycyl-L-seryl-L-seryl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanyl-  
(9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 9  
SQL 9

SEQ 1 GSSPLGPAG

=====

HITS AT: 5-8

REFERENCE 1: 136:211958

L5 ANSWER 18 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 390749-36-7 REGISTRY  
CN L-Valine, L-leucyl-L-leucylglycyl-L-prolyl-L-alanylglycyl-L-histidyl-L-  
alanyl- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 131: PN: US20020007173 SEQID: 165 unclaimed sequence  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
SQL 9  
SQL 9

SEQ 1 LLGPAGHAV

=====

HITS AT: 2-5

REFERENCE 1: 136:117371

L5 ANSWER 19 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 389064-17-9 REGISTRY  
CN Cyclo(L-alanyl-L-phenylalanyl-L-tryptophyl-L-.alpha.-aspartyl-L-prolyl-L-  
leucylglycyl-L-prolyl) (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Brachyestemin B  
LC STN Files: CA, CAPLUS  
NTE cyclic  
SQL 8  
SQL 8

SEQ 1 AFWDPLGP

=====

HITS AT: 1, 6-8

REFERENCE 1: 136:99152

L5 ANSWER 20 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 352635-41-7 REGISTRY  
CN L-Glutamic acid, L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-L-  
threonyl-L-leucyl- (9CI) (CA INDEX NAME)  
OTHER NAMES:

CN 202: PN: WO0155177 SEQID: 1202 unclaimed sequence  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 9  
SQL 9

SEQ 1 ALGPAATLE

====

HITS AT: 2-5

REFERENCE 1: 135:151623

L5 ANSWER 21 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 352628-06-9 REGISTRY  
CN L-Leucine, L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-L-threonyl-L-leucyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 78: PN: WO0155177 SEQID: 377 unclaimed sequence  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 9  
SQL 9

SEQ 1 ALGPAATLL

====

HITS AT: 2-5

REFERENCE 1: 135:151623

L5 ANSWER 22 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 352628-05-8 REGISTRY  
CN L-Isoleucine, L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-L-threonyl-L-leucyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 77: PN: WO0155177 SEQID: 376 unclaimed sequence  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 9  
SQL 9

SEQ 1 ALGPAATLI

====

HITS AT: 2-5

REFERENCE 1: 135:151623

L5 ANSWER 23 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 352628-04-7 REGISTRY  
CN L-Alanine, L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-L-threonyl-L-leucyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 76: PN: WO0155177 SEQID: 375 unclaimed sequence  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 9  
SQL 9

SEQ 1 ALGPAATLA

====

HITS AT: 2-5

REFERENCE 1: 135:151623

L5 ANSWER 24 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 352627-73-7 REGISTRY  
CN L-Valine, L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-L-threonyl-  
(9CI) (CA INDEX NAME)

## OTHER NAMES:

CN 45: PN: W00155177 SEQID: 344 claimed sequence

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 8

SQL 8

SEQ 1 ALGPAATV

====

HITS AT: 2-5

REFERENCE 1: 135:151623

L5 ANSWER 25 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 352627-08-8 REGISTRY  
CN L-Valine, L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-L-threonyl-L-  
leucyl- (9CI) (CA INDEX NAME)

## OTHER NAMES:

CN 277: PN: W00155177 SEQID: 277 claimed sequence

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 9

SQL 9

SEQ 1 ALGPAATLV

====

HITS AT: 2-5

REFERENCE 1: 135:151623

L5 ANSWER 26 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 340238-34-8 REGISTRY  
CN L-Leucine, L-leucyl-L-lysyl-L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-  
alanyl-L-threonyl- (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 10

SQL 10

SEQ 1 LKALGPAATL

====

HITS AT: 4-7

REFERENCE 1: 134:365695

L5 ANSWER 27 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 334754-07-3 REGISTRY  
CN L-Glutamic acid, L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-L-  
threonyl-L-leucyl-L-.alpha.-glutamyl- (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 10

SQL 10

SEQ 1 ALGPAATLEE

====

HITS AT: 2-5

REFERENCE 1: 134:309684

L5 ANSWER 28 OF 76 REGISTRY COPYRIGHT 2003 ACS  
 RN 334732-91-1 REGISTRY  
 CN L-Threonine, L-isoleucyl-L-leucyl-L-lysyl-L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl- (9CI) (CA INDEX NAME)  
 LC STN Files: CA, CAPLUS, TOXCENTER  
 SQL 10  
 SQL 10

SEQ 1 ILKALGPAAT

HITS AT: 5-8

REFERENCE 1: 134:309684

L5 ANSWER 29 OF 76 REGISTRY COPYRIGHT 2003 ACS  
 RN 334732-89-7 REGISTRY  
 CN L-Alanine, L-threonyl-L-isoleucyl-L-leucyl-L-lysyl-L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl- (9CI) (CA INDEX NAME)  
 LC STN Files: CA, CAPLUS, TOXCENTER  
 SQL 10  
 SQL 10

SEQ 1 TILKALGPAA

HITS AT: 6-9

REFERENCE 1: 134:365695

REFERENCE 2: 134:309684

L5 ANSWER 30 OF 76 REGISTRY COPYRIGHT 2003 ACS  
 RN 334731-87-2 REGISTRY  
 CN L-Leucine, L-lysyl-L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-L-threonyl- (9CI) (CA INDEX NAME)  
 LC STN Files: CA, CAPLUS, TOXCENTER  
 SQL 9  
 SQL 9

SEQ 1 KALGPAATL

HITS AT: 3-6

REFERENCE 1: 134:365695

REFERENCE 2: 134:309684

L5 ANSWER 31 OF 76 REGISTRY COPYRIGHT 2003 ACS  
 RN 334731-85-0 REGISTRY  
 CN L-Alanine, L-isoleucyl-L-leucyl-L-lysyl-L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl- (9CI) (CA INDEX NAME)  
 LC STN Files: CA, CAPLUS, TOXCENTER  
 SQL 9  
 SQL 9

SEQ 1 ILKALGPAA

HITS AT: 5-8

REFERENCE 1: 134:365695

REFERENCE 2: 134:309684

L5 ANSWER 32 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 334731-84-9 REGISTRY  
CN L-Alanine, L-threonyl-L-isoleucyl-L-leucyl-L-lysyl-L-alanyl-L-leucylglycyl-L-prolyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 9  
SQL 9

SEQ 1 TILKALGPA

=====

HITS AT: 6-9

REFERENCE 1: 134:365695

REFERENCE 2: 134:309684

L5 ANSWER 33 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 334730-91-5 REGISTRY  
CN L-Leucine, L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-L-threonyl- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 157: PN: WO0155177 SEQID: 157 claimed sequence  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 8  
SQL 8

SEQ 1 ALGPAATL

=====

HITS AT: 2-5

REFERENCE 1: 135:151623

REFERENCE 2: 134:309684

L5 ANSWER 34 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 334730-90-4 REGISTRY  
CN L-Threonine, L-lysyl-L-alanyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 8  
SQL 8

SEQ 1 KALGPAAT

=====

HITS AT: 3-6

REFERENCE 1: 134:309684

L5 ANSWER 35 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 334730-89-1 REGISTRY  
CN L-Alanine, L-isoleucyl-L-leucyl-L-lysyl-L-alanyl-L-leucylglycyl-L-prolyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER  
SQL 8  
SQL 8



SEQ 1 ILKALGPA

HITS AT: 5-8

REFERENCE 1: 134:365695

REFERENCE 2: 134:309684

L5 ANSWER 36 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 321308-73-0 REGISTRY

CN L-Leucine, L-prolyl-L-leucylglycyl-L-prolyl-L-alanyl-L-seryl-L-seryl-  
(9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS, TOXCENTER

SQL 8

SQL 8

SEQ 1 PLGPASSL

HITS AT: 2-5

REFERENCE 1: 134:114851

L5 ANSWER 37 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 304851-60-3 REGISTRY

CN L-Alaninamide, L-leucylglycyl-L-prolyl-N-(2-aminoethyl)- (9CI) (CA INDEX  
NAME)

LC STN Files: CA, CAPLUS, TOXCENTER

NTE modified (modifications unspecified)

SQL 4

SQL 4

SEQ 1 LGPA

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 133:355232

L5 ANSWER 38 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 258332-94-4 REGISTRY

CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-  
phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-N5-(aminocarbonyl)-  
D-ornithyl-L-leucyl-N-[3-[(aminoiminomethyl)amino]propyl]glycyl-L-prolyl-  
(9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS

NTE modified

type	-----	location	-----	description
terminal mod.	Ala-1	-		N-acetyl
terminal mod.	Ala-10	-		C-terminal amide
uncommon	Cit-6	-		-
modification	Ala-1	-		2-naphthalenyl<2-Naph>
modification	Phe-2	-		chloro<Cl>
modification	Ala-3	-		3-pyridinyl<3Py>
modification	Gly-8	-		undetermined modification

SQL 10  
SQL 10

SEQ 1 AFASYXLGPA  
=====

HITS AT: 7-10

REFERENCE 1: 132:152142

L5 ANSWER 39 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 197438-20-3 REGISTRY  
CN D-Alanine, D-arginyl-D-seryl-D-leucylglycyl-D-prolyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
SQL 6  
SQL 6

SEQ 1 RSLGPA  
=====

HITS AT: 3-6

REFERENCE 1: 127:326501

L5 ANSWER 40 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 189336-22-9 REGISTRY  
CN L-Lysine, glycyl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanyl-L-lysyl-L-lysyl-L-lysyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
SQL 10  
SQL 10

SEQ 1 GPLGPAKKKK  
=====

HITS AT: 3-6

REFERENCE 1: 126:321066

L5 ANSWER 41 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 189336-21-8 REGISTRY  
CN L-Alanine, glycyl-L-prolyl-L-leucylglycyl-L-prolyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
SQL 6  
SQL 6

SEQ 1 GPLGPA  
=====

HITS AT: 3-6

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 126:321066

L5 ANSWER 42 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 171105-39-8 REGISTRY  
CN L-Valine, N-[N-[N-[N-[1-[N-(N-L-leucyl-L-leucyl)glycyl]-L-prolyl]-L-alanyl]-L-.alpha.-aspartyl]glycyl]-L-methionyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
SQL 9  
SQL 9

SEQ 1 LLGPADGMV

=====

HITS AT: 2-5

REFERENCE 1: 124:7073

L5 ANSWER 43 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 171105-38-7 REGISTRY

CN L-Valine, N-[N-[N-[N-[N-[N-(N-L-isoleucyl-L-leucyl)-L-leucyl]glycyl]-L-prolyl]-L-alanyl]-L-.alpha.-aspartyl]glycyl]-L-methionyl]- (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

SQL 10

SQL 10

SEQ 1 ILLGPADGMV

=====

HITS AT: 3-6

REFERENCE 1: 124:7073

L5 ANSWER 44 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 159348-01-3 REGISTRY

CN 1-75-Colony-stimulating factor (human clone pBRV-2 reduced), 16-L-arginine-17-L-serine-23-L-arginine-34-L-arginine-40-L-arginine-75-L-lysine-76-(N-hydroxy-L-homocysteinamide)-, (76.fwdarw.1')-thioether with N-(mercaptoacetyl)-L-seryl-L-leucyl-L-leucine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-75-Colony-stimulating factor (human clone pBRV-2 reduced), 16-L-arginine-17-L-serine-23-L-arginine-34-L-arginine-40-L-arginine-75-L-lysine-76-(N-hydroxy-L-homocysteinamide)-, (76.fwdarw.1')-sulfide with N-(mercaptoacetyl)-L-seryl-L-leucyl-L-leucine

LC STN Files: CA, CAPLUS

NTE multichain

modified (modifications unspecified)

type	-----	location	-----	description
bridge		Hcy-76	- Ser-1'	covalent bridge
uncommon		Hcy-76	-	-

SQL 79,76,3

SQL 79,76,3

SEQ 1 TPLGPASSLP QSFLLRSLAQ VVRIQGDGAA LQERLCATYR LCHPEELVLL

=====

HITS AT: 3-6

REFERENCE 1: 122:10665

L5 ANSWER 45 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 151264-92-5 REGISTRY

CN Glycine, N-[N-[N-[N-[N-[N-[N-[1-[(1,1-dimethylethoxy)carbonyl]-L-prolyl]-L-alanyl]-L-.alpha.-glutamyl]-L-leucyl]glycyl]-L-prolyl]-L-alanyl]-L-.alpha.-glutamyl]-L-leucyl]-, 1-(2-oxo-2-phenylethyl) 5,5'-bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS

NTE modified

type	location	description
modification	Pro-1	(1,1-dimethylethoxy) carbonyl<Boc>
modification	Glu-3	phenylmethyl<Bzl>
modification	Glu-8	phenylmethyl<Bzl>

SQL 10

SQL 10

SEQ 1 PAELGPAELG

=====

HITS AT: 4-7

REFERENCE 1: 120:31209

REFERENCE 2: 119:250478

L5 ANSWER 46 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 148825-03-0 REGISTRY

CN L-Alanine, N-[1-[N-[N-(N-L-arginyl-L-methionyl)-L-phenylalanyl]-L-leucyl]glycyl]-L-prolyl]- (9CI) (CA INDEX NAME)

LC STN Files: CA, CAPLUS

SQL 7

SQL 7

SEQ 1 RMFLGPA

=====

HITS AT: 4-7

REFERENCE 1: 119:73066

L5 ANSWER 47 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 147097-70-9 REGISTRY

CN 270-373-Protein (human immunodeficiency virus 1 gene gag),  
N-[[[4-[[[1-[[[1-(methoxycarbonyl)nonyl]amino]carbonyl]nonyl]amino]carbonyl]-9H-fluoren-9-yl]methoxy]carbonyl]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 270-373-Protein (human immunodeficiency provirus 1 gene gag),  
N-[[[4-[[[1-[[[1-(methoxycarbonyl)nonyl]amino]carbonyl]nonyl]amino]carbonyl]-9H-fluoren-9-yl]methoxy]carbonyl]-

LC STN Files: CA, CAPLUS

NTE multichain

modified (modifications unspecified)

type	location	description
bridge	Leu-1	- Aaa-1'
uncommon	Aaa-1'	-
uncommon	Aaa-2'	-

SQL 106,104,2

SQL 106,104,2

SEQ 51 TLLVQNPANPD AKTILKALGP AATLEEMMTA AQGVGGPGHK ARVLAEAMSQ

=====

HITS AT: 68-71

REFERENCE 1: 118:192247

L5 ANSWER 48 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 146762-91-6 REGISTRY  
CN L-Arginine, N2-[N-[N-[1-(N-L-leucylglycyl)-L-prolyl]-L-alanyl]glycyl]-  
(9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
SQL 6  
SQL 6

SEQ 1 LGPAGR

=====

HITS AT: 1-4

REFERENCE 1: 118:169618

L5 ANSWER 49 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 143433-68-5 REGISTRY  
CN L-Prolinamide, L-threonyl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanyl-L-  
seryl-L-seryl-L-leucyl- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified

type	-----	location	-----	description
terminal mod.	Pro-10	-		C-terminal amide

SQL 10

SQL 10

SEQ 1 TPLGPASSLP

=====

HITS AT: 3-6

REFERENCE 1: 117:143655

L5 ANSWER 50 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 133083-35-9 REGISTRY  
CN D-Lysine, 1-(2,4-dinitrophenyl)-L-prolyl-L-leucylglycyl-L-prolyl-3-(7-  
methoxy-2-oxo-2H-1-benzopyran-4-yl)alanyl- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN D-Lysine, N2-[N-[1-[N-[N-[1-(2,4-dinitrophenyl)-L-prolyl]-L-leucyl]glycyl]-  
L-prolyl]-3-(7-methoxy-2-oxo-2H-1-benzopyran-4-yl)-DL-alanyl]-  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	-----	location	-----	description
stereo	Ala-5	-		DL
stereo	Lys-6	-		D

SQL 6

SQL 6

SEQ 1 PLGPAK

=====

HITS AT: 2-5

REFERENCE 1: 114:159650

L5 ANSWER 51 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 124859-55-8 REGISTRY  
CN L-Alanine, L-lysyl-L-threonyl-L-isoleucyl-L-leucyl-L-lysyl-L-alanyl-L-leucylglycyl-L-prolyl- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN L-Alanine, N-[1-[N-[N-[N2-[N-[N-(N-L-lysyl-L-threonyl)-L-isoleucyl]-L-leucyl]-L-lysyl]-L-alanyl]-L-leucyl]glycyl]-L-prolyl]-  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
SQL 10  
SQL 10

SEQ 1 KTILKALGPA

=====

HITS AT: 7-10

REFERENCE 1: 134:365695

REFERENCE 2: 134:309684

REFERENCE 3: 115:112651

REFERENCE 4: 112:62598

L5 ANSWER 52 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 114454-63-6 REGISTRY  
CN L-Valine, N-[N2-[N2-[N-[N-[1-(N-L-leucylglycyl)-L-prolyl]-L-alanyl]glycyl]-L-asparaginy]-L-lysyl]- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
SQL 8  
SQL 8

SEQ 1 LGPAGNKV

=====

HITS AT: 1-4

REFERENCE 1: 124:48923

REFERENCE 2: 108:200828

L5 ANSWER 53 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 111110-30-6 REGISTRY  
CN L-Alanine, N-[1-[N-[N-(2-furanylcabonyl)-L-leucyl]glycyl]-L-prolyl]- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	location	description
modification	Leu-1	undetermined modification

SQL 4

SQL 4

SEQ 1 LGPA

=====

HITS AT: 1-4

## \*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 107:191131

L5 ANSWER 54 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 111110-12-4 REGISTRY  
CN L-Alanine, N-[1-[N-(N-benzoyl-L-leucyl)glycyl]-L-prolyl]-, methyl ester  
(9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	location	description
modification	Leu-1	- benzoyl<Bz>

SQL 4  
SQL 4

SEQ 1 LGPA  
====

HITS AT: 1-4

## \*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 107:191131

L5 ANSWER 55 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 111110-11-3 REGISTRY  
CN L-Alanine, N-[1-[N-(N-benzoyl-L-leucyl)glycyl]-L-prolyl]- (9CI) (CA INDEX  
NAME)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	location	description
modification	Leu-1	- benzoyl<Bz>

SQL 4  
SQL 4

SEQ 1 LGPA  
====

HITS AT: 1-4

## \*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 107:191131

L5 ANSWER 56 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 96596-40-6 REGISTRY  
CN L-Alanine, N-[1-[N-[N-{3-(2-furanyl)-1-oxo-2-propenyl]-L-leucyl}glycyl]-L-  
prolyl]-, methyl ester (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	location	description
modification	Leu-1	- undetermined modification

SQL 4  
SQL 4

SEQ 1 LGPA

====

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 102:217337

L5 ANSWER 57 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 96596-39-3 REGISTRY  
CN L-Alanine, N-[1-[N-[N-[(1,1-dimethylethoxy)carbonyl]-L-leucyl]glycyl]-L-prolyl]-, methyl ester (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	location	description
modification	Leu-1	(1,1-dimethylethoxy) carbonyl<Boc>

SQL 4  
SQL 4

SEQ 1 LGPA

====

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 102:217337

L5 ANSWER 58 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 96596-31-5 REGISTRY  
CN L-Alanine, N-[1-[N-[N-(1-oxo-3-phenyl-2-propenyl)-L-leucyl]glycyl]-L-prolyl]-, methyl ester (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	location	description
modification	Leu-1	1-oxo-3-phenyl-2-propenyl

SQL 4  
SQL 4

SEQ 1 LGPA

====

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 109:2885

REFERENCE 2: 103:192081

REFERENCE 3: 102:217337



L5 ANSWER 59 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 96595-84-5 REGISTRY  
CN L-Alanine, N-[1-[N-[N-(1-oxo-3-phenyl-2-propenyl)-L-leucyl]glycyl]-L-prolyl]- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	location	description
modification	Leu-1	1-oxo-3-phenyl-2-propenyl

SQL 4  
SQL 4

SEQ 1 LGPA

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 109:2885

REFERENCE 2: 103:192081

REFERENCE 3: 102:217337

L5 ANSWER 60 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 96194-15-9 REGISTRY  
CN L-Alanine, N-[1-[N-[N-[4-(2-furanyl)-1,4-dioxo-2-butenyl]-L-leucyl]glycyl]-L-prolyl]- (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	location	description
modification	Leu-1	undetermined modification

SQL 4  
SQL 4

SEQ 1 LGPA

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 103:18900

L5 ANSWER 61 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 86563-79-3 REGISTRY  
CN L-Alanine, N-[1-(N-L-leucylglycyl)-L-prolyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Acetic acid, trifluoro-, compd. with N-[1-(N-L-leucylglycyl)-L-prolyl]-L-alanine (1:1)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)

type	location	description
------	----------	-------------

-----  
modification - - - - - undetermined modification  
-----

SQL 4  
SQL 4

SEQ 1 LGPA

====

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*  
RN 86563-79-3 REGISTRY

SEQ 1 LGPA

====

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

SEQ 1 LGPA

====

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 99:118322

L5 ANSWER 62 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 86563-78-2 REGISTRY  
CN L-Alanine, L-leucylglycyl-L-prolyl- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN L-Alanine, N-[1-(N-L-leucylglycyl)-L-prolyl]-  
OTHER NAMES:  
CN 1: PN: WO0064486 PAGE: 11 unclaimed sequence  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
SQL 4  
SQL 4

SEQ 1 LGPA

====

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 133:355232

REFERENCE 2: 126:321066

L5 ANSWER 63 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 86563-77-1 REGISTRY  
CN L-Alanine, N-[(1,1-dimethylethoxy)carbonyl]-L-leucylglycyl-L-prolyl- (9CI)  
(CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN L-Alanine, N-[1-[N-[N-[(1,1-dimethylethoxy)carbonyl]-L-leucylglycyl]-L-prolyl]-  
prolyl]-  
LC STN Files: CA, CAPLUS, TOXCENTER  
NTE modified (modifications unspecified)

-----  
type - - - - - location - - - - - description  
-----

Searched by M. Smith

-----  
modification      Leu-1                      -                      (1,1-dimethylethoxy) carbonyl<Boc>  
-----

SQL 4  
SQL 4

SEQ            1 LGPA

=====

HITS AT:      1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE    1:   133:355232

REFERENCE    2:   99:118322

L5    ANSWER 64 OF 76    REGISTRY    COPYRIGHT 2003 ACS

RN    83387-70-6    REGISTRY

CN    L-Alaninamide, N-acetylglucyl-L-prolyl-L-alanylglucyl-L-prolyl-L-leucylglucyl-L-prolyl-N-methyl- (9CI)    (CA INDEX NAME)

LC    STN Files:    CA, CAPLUS

NTE    modified

-----  
type                      -----    location    -----                      description  
-----

terminal mod.      Gly-1                      -                      N-acetyl  
-----

SQL 9

SQL 9

SEQ            1 GPAGPLGPA

=====

HITS AT:      6-9

REFERENCE    1:   97:177203

L5    ANSWER 65 OF 76    REGISTRY    COPYRIGHT 2003 ACS

RN    78832-65-2    REGISTRY

CN    L-Alanine, N-[3-(2-furanyl)-1-oxo-2-propenyl]-L-leucylglucyl-L-prolyl- (9CI)    (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN    L-Alanine, N-[1-[N-[N-[3-(2-furanyl)-1-oxo-2-propenyl]-L-leucyl]glucyl]-L-prolyl]-

LC    STN Files:    CA, CAPLUS, CHEMCATS, CSCHEM, MEDLINE, TOXCENTER

NTE    modified (modifications unspecified)

-----  
type                      -----    location    -----                      description  
-----

modification      Leu-1                      -                      undetermined modification  
-----

SQL 4

SQL 4

SEQ            1 LGPA

=====

HITS AT:      1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 131:84673  
REFERENCE 2: 122:310033  
REFERENCE 3: 121:103061  
REFERENCE 4: 117:146002  
REFERENCE 5: 112:115491  
REFERENCE 6: 109:124938  
REFERENCE 7: 108:218111  
REFERENCE 8: 105:221504  
REFERENCE 9: 103:192081  
REFERENCE 10: 102:217337

L5 ANSWER 66 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 55260-05-4 REGISTRY  
CN L-Alanine, N-[1-(N-L-leucylglycyl)-L-prolyl]-, methyl ester (9CI) (CA  
INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified (modifications unspecified)  
SQL 4  
SQL 4

SEQ 1 LGPA

====

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 82:156705

L5 ANSWER 67 OF 76 REGISTRY COPYRIGHT 2003 ACS  
RN 55260-04-3 REGISTRY  
CN L-Alanine, N-[N-[1-[N-[N-[1-[[1-methyl-7-(1-methylethyl)-4-  
azulenyl]acetyl]-L-prolyl]-L-leucyl]glycyl]-L-prolyl]-L-alanyl]-, methyl  
ester (9CI) (CA INDEX NAME)  
LC STN Files: CA, CAPLUS  
NTE modified

type	location	description
modification	Pro-1 -	undetermined modification

SQL 6

SQL 6

SEQ 1 PLGPAA

====

HITS AT: 2-5

REFERENCE 1: 82:156705

L5 ANSWER 68 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 55260-03-2 REGISTRY  
 CN L-Alanine, N-[1-[N-[N-[1-methyl-7-(1-methylethyl)-4-azulenyl]acetyl]-L-leucyl]glycyl]-L-prolyl]-, methyl ester (9CI) (CA INDEX NAME)  
 LC STN Files: CA, CAPLUS  
 NTE modified (modifications unspecified)

type	location	description
modification	Leu-1	undetermined modification

SQL 4  
 SQL 4

SEQ 1 LGPA

HITS AT: 1-4

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 82:156705

L5 ANSWER 69 OF 76 REGISTRY COPYRIGHT 2003 ACS  
 RN 37058-26-7 REGISTRY  
 CN L-Alanine, N-[1-[N-[N-[1-(N-acetyl)glycyl]-L-prolyl]-D-leucyl]glycyl]-L-prolyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN N-Acetyl)glycyl-L-prolyl-D-leucyl)glycyl-L-prolyl-L-alanine  
 LC STN Files: CA, CAPLUS  
 NTE modified

type	location	description
terminal mod.	Gly-1	N-acetyl

SQL 6  
 SQL 6

SEQ 1 GPLGPA

HITS AT: 3-6

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 77:58236

L5 ANSWER 70 OF 76 REGISTRY COPYRIGHT 2003 ACS  
 RN 35866-17-2 REGISTRY  
 CN L-Alanine, N-[1-[N-[N-[1-[[1-methyl-7-(1-methylethyl)-4-azulenyl]acetyl]-L-prolyl]-L-leucyl]glycyl]-L-prolyl]-, methyl ester (9CI) (CA INDEX NAME)  
 LC STN Files: CA, CAPLUS  
 NTE modified (modifications unspecified)

type	location	description
modification	Pro-1	undetermined modification

SQL 5  
 SQL 5

SEQ 1 PLGPA

HITS AT: 2-5

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 82:156705

REFERENCE 2: 76:22421

L5 ANSWER 71 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 35764-50-2 REGISTRY

CN D-Arginine, N2-[N-[1-[N-[N-[1-[[4-(phenylazo)phenyl]methoxy]carbonyl]-L-prolyl]-L-leucyl]glycyl]-L-prolyl]-L-alanyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN (4-Phenylazobenzyloxycarbonyl)-L-prolyl-L-leucylglycyl-L-prolyl-L-alanyl-D-arginine

LC STN Files: CA, CAPLUS

NTE modified (modifications unspecified)

type	location	description
modification	Pro-1	[[4-(phenylazo)phenyl]methoxy]carbonyl<Pz>

SQL 6

SQL 6

SEQ 1 PLGPAR

HITS AT: 2-5

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 76:22399

L5 ANSWER 72 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 35764-48-8 REGISTRY

CN D-Arginine, N-[N-[N-[1-[N-[N-[1-[[1-methyl-7-(1-methylethyl)-4-azulenyl]acetyl]-L-prolyl]-L-leucyl]glycyl]-L-prolyl]-L-alanyl]-L-alanyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN (7-Isopropyl-1-methylazulen-4-yl)acetyl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanyl-L-alanyl-D-arginine

LC STN Files: CA, CAPLUS

NTE modified (modifications unspecified)

type	location	description
modification	Pro-1	undetermined modification

SQL 7

SQL 7

SEQ 1 PLGPAAR

HITS AT: 2-5

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 76:22399

REFERENCE 2: 76:22397

L5 ANSWER 73 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 35764-47-7 REGISTRY

CN D-Arginine, N2-[N-[1-[N-[N-[1-[[1-methyl-7-(1-methylethyl)-4-azulenyl]acetyl]-L-prolyl]-L-leucyl]glycyl]-L-prolyl]-L-alanyl]- (9CI)  
(CA INDEX NAME)

OTHER NAMES:

CN (7-Isopropyl-1-methylazulen-4-yl)acetyl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanyl-D-arginine

LC STN Files: CA, CAPLUS

NTE modified (modifications unspecified)

type	location	description
modification	Pro-1	undetermined modification

SQL 6

SQL 6

SEQ 1 PLGPAR

====

HITS AT: 2-5

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 76:22399

REFERENCE 2: 76:22397

L5 ANSWER 74 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 35752-64-8 REGISTRY

CN 2,5-Pyrrolidinedione, 1-[[N-[1-[N-[N-[1-[[1-methyl-7-(1-methylethyl)-4-azulenyl]acetyl]-L-prolyl]-L-leucyl]glycyl]-L-prolyl]-L-alanyl]oxy]- (9CI)  
(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN L-Alanine, N-[1-[N-[N-[1-[[1-methyl-7-(1-methylethyl)-4-azulenyl]acetyl]-L-prolyl]-L-leucyl]glycyl]-L-prolyl]-, 2,5-pyrrolidinedione deriv.

OTHER NAMES:

CN (7-Isopropyl-1-methylazulen-4-yl)acetyl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanine N-hydroxysuccinimide ester

LC STN Files: CA, CAPLUS

NTE modified (modifications unspecified)

type	location	description
modification	Pro-1	undetermined modification

SQL 5

SQL 5

SEQ 1 PLGPA

====

HITS AT: 2-5

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Searched by M. Smith

REFERENCE 1: 76:22397

L5 ANSWER 75 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 35752-63-7 REGISTRY

CN L-Alanine, N-[1-[N-[N-[1-[[1-methyl-7-(1-methylethyl)-4-azulenyl]acetyl]-L-prolyl]-L-leucyl]glycyl]-L-prolyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN (7-Isopropyl-1-methylazulen-4-yl)acetyl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanine

LC STN Files: CA, CAPLUS

NTE modified (modifications unspecified)

type	location	description
modification	Pro-1	undetermined modification

SQL 5

SQL 5

SEQ 1 PLGPA

=====

HITS AT: 2-5

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 76:22397

L5 ANSWER 76 OF 76 REGISTRY COPYRIGHT 2003 ACS

RN 35752-56-8 REGISTRY

CN D-Arginine, N2-[N-[N-[1-[N-[N-[1-[[1-methyl-7-(1-methylethyl)-4-azulenyl]acetyl]-L-prolyl]-L-leucyl]glycyl]-L-prolyl]-L-alanyl]-D-alanyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN (7-Isopropyl-1-methylazulen-4-yl)acetyl-L-prolyl-L-leucylglycyl-L-prolyl-L-alanyl-D-alanyl-D-arginine

LC STN Files: CA, CAPLUS

NTE modified (modifications unspecified)

type	location	description
modification	Pro-1	undetermined modification

SQL 7

SQL 7

SEQ 1 PLGPAAR

=====

HITS AT: 2-5

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 76:22397



OM protein - protein search, using sw model

```
Run on:      March 18, 2003, 09:33:38 ; Search time 28 Seconds
              (without alignments)
              29.435 Million cell updates/sec
```

Title: US-09-520-856A-1  
Perfect score: 21  
Sequence: 1 LGPA 4

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 671580 seqs, 206047115 residues

Total number of hits satisfying chosen parameters: 1224

```
Minimum DB seq length: 0
Maximum DB seq length: 10
```

```
Post-processing: Minimum Match 0%
                  Maximum Match 100%
                  Listing first 45 summaries
```

```
Database : SPTREMBL_21:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_rvirus:*
16: sp_bacteriap:*
17: sp_archeap:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result						Query	
No.	Score	Match	Length	DB	ID	Description	

1	19	90.5	10	11	Q63389	Q63389 rattus norv
2	17	81.0	9	4	Q9H326	Q9h326 homo sapien
3	15	71.4	10	2	Q8RJF1	Q8rjfl pseudomonas
4	15	71.4	10	8	Q8SH93	Q8sh93 brookesia p
5	14	66.7	7	15	Q07624	Q07624 rous sarcom
6	14	66.7	10	13	Q9PRU9	Q9pru9 sparus aura
7	13	61.9	8	2	Q9X3K1	Q9x3k1 prochloroco
8	13	61.9	8	4	Q16468	Q16468 homo sapien
9	13	61.9	8	5	O02032	O02032 lytechinus
10	13	61.9	8	6	Q9TRY3	Q9try3 sus sp. ins
11	13	61.9	8	10	Q42507	Q42507 triticum ae
12	13	61.9	9	5	Q9TWV0	Q9twv0 anthopleura
13	13	61.9	9	5	Q9TWD6	Q9twd6 leptinotars
14	13	61.9	9	11	Q8R514	Q8r514 rattus norv
15	13	61.9	10	2	Q9R7J8	Q9r7j8 helicobacte
16	13	61.9	10	4	Q9UNF2	Q9unf2 homo sapien
17	13	61.9	10	4	Q9P2Z9	Q9p2z9 homo sapien
18	13	61.9	10	4	Q9UE86	Q9ue86 homo sapien
19	13	61.9	10	4	Q14096	Q14096 homo sapien
20	13	61.9	10	5	P82222	P82222 bombyx mori
21	13	61.9	10	6	Q9TS42	Q9ts42 sus scrofa
22	13	61.9	10	10	Q99213	Q99213 aegilops sq
23	13	61.9	10	11	Q9QVF0	Q9qvf0 mus sp. pro
24	13	61.9	10	11	Q9QVE9	Q9qve9 mus sp. pro
25	13	61.9	10	12	P90373	P90373 pseudorabie
26	13	61.9	10	13	Q90Y93	Q90y93 gallus gall
27	13	61.9	10	13	Q9TWX9	Q9twx9 eptatretus
28	12	57.1	10	2	Q9APT8	Q9apt8 pseudomonas
29	11	52.4	8	5	P83277	P83277 macrobrachi
30	11	52.4	8	5	P82689	P82689 periplaneta
31	11	52.4	8	11	Q62933	Q62933 rattus norv
32	11	52.4	8	11	Q62528	Q62528 mus spretus
33	11	52.4	8	12	Q83349	Q83349 murine coro
34	11	52.4	8	15	Q85562	Q85562 moloney mur
35	11	52.4	9	2	Q51765	Q51765 pseudomonas
36	11	52.4	9	2	Q99193	Q99193 pseudomonas
37	11	52.4	9	4	Q9H522	Q9h522 homo sapien
38	11	52.4	9	4	Q9UE09	Q9ue09 homo sapien
39	11	52.4	9	6	Q28112	Q28112 bos taurus
40	11	52.4	9	8	P92072	P92072 euhadra her
41	11	52.4	9	8	Q94VI0	Q94vi0 varanus gig
42	11	52.4	9	11	Q924N8	Q924n8 mus musculu
43	11	52.4	9	13	P83056	P83056 bombina var
44	11	52.4	9	16	Q935G1	Q935g1 salmonella
45	11	52.4	10	4	O60912	O60912 homo sapien

# ALIGNMENTS

## RESULT 1

Q63389

ID Q63389 PRELIMINARY; PRT; 10 AA.

AC Q63389;

DT 01-NOV-1996 (TrEMBLrel. 01, Created)

DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)

DT 01-NOV-1998 (TrEMBLrel. 08, Last annotation update)

DE Ornithine decarboxylase (ODC).  
OS Rattus norvegicus (Rat).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.  
OX NCBI\_TaxID=10116;  
RN [1]  
RP SEQUENCE FROM N.A.  
RC STRAIN=SPRAGUE-DAWLEY; TISSUE=TESTIS;  
RX MEDLINE=89255378; PubMed=2722815;  
RA Wen L., Huang J.K., Blackshear P.J.;  
RT "Rat ornithine decarboxylase gene. Nucleotide sequence, potential  
RT regulatory elements, and comparison to the mouse gene.";  
RL J. Biol. Chem. 264:9016-9021(1989).  
DR EMBL; J04791; AAA66163.1; -.  
SQ SEQUENCE 10 AA; 1074 MW; 30F6EE69D415BDC7 CRC64;

Query Match 90.5%; Score 19; DB 11; Length 10;  
Best Local Similarity 75.0%; Pred. No. 5.3e+02;  
Matches 3; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LGPA 4  
 :|||  
Db 1 MGPA 4

Search completed: March 18, 2003, 09:34:56  
Job time : 30 secs

OM protein - protein search, using sw model

Run on: March 18, 2003, 09:33:39 ; Search time 10 Seconds  
 (without alignments)  
 16.591 Million cell updates/sec

Title: US-09-520-856A-1  
 Perfect score: 21  
 Sequence: 1 LGPA 4

Scoring table: BLOSUM62  
 Gapop 10.0 , Gapext 0.5

Searched: 112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 346

Minimum DB seq length: 0  
 Maximum DB seq length: 10

Post-processing: Minimum Match 0%  
 Maximum Match 100%  
 Listing first 45 summaries

Database : SwissProt\_40:\*

Pred. No. is the number of results predicted by chance to have a  
 score greater than or equal to the score of the result being printed,  
 and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Query		DB	ID	Description
	Score	Match Length			
1	17	81.0	8	1	RS7_MYCIT
2	17	81.0	9	1	FAR9_ASCSU
3	14	66.7	9	1	TKL1_LOCTI
4	14	66.7	10	1	TRP8_LEUMA
5	13	61.9	7	1	MNP1_LEPDE
6	13	61.9	8	1	AL15_CARMA
7	13	61.9	8	1	AL16_CARMA
8	13	61.9	8	1	ALL5_CALVO
9	13	61.9	8	1	ALL8_CARMA
10	13	61.9	8	1	ALL9_CARMA
11	13	61.9	8	1	FAR7_ASCSU
12	13	61.9	8	1	VGLG_HSV2B
13	13	61.9	10	1	BPP_VIPAS
14	13	61.9	10	1	COXO_RAT
15	13	61.9	10	1	COXO_THUOB
16	11	52.4	8	1	LCK1_LEUMA
17	11	52.4	8	1	LCK7_LEUMA
					P33564 mycobacteri
					P43172 ascaris suu
					P16223 locusta mig
					P81740 leucophaea
					P42984 leptinotars
					P81818 carcinus ma
					P81819 carcinus ma
					P41841 calliphora
					P81811 carcinus ma
					P81812 carcinus ma
					P43171 ascaris suu
					P81780 herpes simp
					P31351 vipera aspi
					P80432 rattus norv
					P80982 thunnus obe
					P21140 leucophaea
					P19989 leucophaea

18	11	52.4	9	1	UPA6_HUMAN	P30092	homo sapien
19	11	52.4	10	1	COXH_ONCMY	P80331	oncorhynchu
20	11	52.4	10	1	COXQ_RABIT	P80336	oryctolagus
21	11	52.4	10	1	COXQ_SHEEP	P80337	ovis aries
22	11	52.4	10	1	GON1_CLUPA	P81749	clupea pall
23	11	52.4	10	1	NS1_MYCTU	P81135	mycobacteri
24	11	52.4	10	1	Q2OB_COMTE	P80465	comamonas t
25	11	52.4	10	1	TKNC_RANCA	P22690	rana catesb
26	11	52.4	10	1	TMOF_AEDAE	P19425	aedes aegyp
27	11	52.4	10	1	TRP5_LEUMA	P81737	leucophaea
28	11	52.4	10	1	TRP6_LEUMA	P81738	leucophaea
29	11	52.4	10	1	TRP7_LEUMA	P81739	leucophaea
30	11	52.4	10	1	UPA2_HUMAN	P30088	homo sapien
31	11	52.4	10	1	UPA8_HUMAN	P30094	homo sapien
32	10	47.6	9	1	OXYA_SQUAC	P42999	squalus aca
33	10	47.6	9	1	OXYT_RABIT	P32878	oryctolagus
34	10	47.6	9	1	RE42_LITRU	P82075	litoria rub
35	10	47.6	10	1	CU30_LOCFI	P11735	locusta mig
36	10	47.6	10	1	TKL4_LOCFI	P30250	locusta mig
37	10	47.6	10	1	VEG6_BACSU	P80699	bacillus su
38	9	42.9	7	1	BRHP_CONIM	P58803	conus imper
39	9	42.9	9	1	BUK_CLOPA	P81337	clostridium
40	9	42.9	9	1	DSIP_RABIT	P01158	oryctolagus
41	9	42.9	9	1	MGMT_BOVIN	P29177	bos taurus
42	9	42.9	9	1	XYLA_STRSQ	P19149	streptomyce
43	9	42.9	9	1	YBFR_AZOVI	P25825	azotobacter
44	9	42.9	10	1	GON1_ALLMI	P37041	alligator m
45	9	42.9	10	1	PPCK_FASHE	P80525	fasciola he

# ALIGNMENTS

## RESULT 1

RS7\_MYCIT

ID RS7\_MYCIT STANDARD; PRT; 8 AA.

AC P33564;

DT 01-FEB-1994 (Rel. 28, Created)

DT 01-FEB-1994 (Rel. 28, Last sequence update)

DT 01-FEB-1994 (Rel. 28, Last annotation update)

DE 30S ribosomal protein S7 (Fragment).

GN RPSG.

OS Mycobacterium intracellulare.

OC Bacteria; Actinobacteria; Actinobacteria (class); Actinobacteridae;

OC Actinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium.

OX NCBI\_TaxID=1767;

RN [1]

RP SEQUENCE FROM N.A.

RX MEDLINE=93197130; PubMed=8451173;

RA Nair J., Rouse D.A., Morris S.L.;

RT "Nucleotide sequence analysis of the ribosomal S12 gene of

RT Mycobacterium intracellulare.";

RL Nucleic Acids Res. 21:1039-1039(1993).

CC -!- FUNCTION: PROTEIN S7 BINDS SPECIFICALLY TO PART OF THE 3' END OF  
CC 16S RIBOSOMAL RNA (BY SIMILARITY).

CC -!- SIMILARITY: BELONGS TO THE S7P FAMILY OF RIBOSOMAL PROTEINS.

CC -----

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CC -----

DR EMBL; L08171; AAA25376.1; -.  
DR PIR; S35538; S35538.  
DR InterPro; IPR000235; Ribosomal\_S7.  
DR PROSITE; PS00052; RIBOSOMAL\_S7; PARTIAL.  
KW Ribosomal protein; rRNA-binding.  
FT INIT\_MET 0 0 BY SIMILARITY.  
FT NON\_TER 8 8  
SQ SEQUENCE 8 AA; 850 MW; 63276DC768732417 CRC64;

Query Match 81.0%; Score 17; DB 1; Length 8;  
Best Local Similarity 100.0%; Pred. No. 1.1e+05;  
Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 GPA 4  
|||  
Db 4 GPA 6

Search completed: March 18, 2003, 09:35:39  
Job time : 12 secs

OM protein - protein search, using sw model

Run on: March 18, 2003, 09:33:38 ; Search time 16 Seconds  
 (without alignments)  
 24.034 Million cell updates/sec

Title: US-09-520-856A-1  
 Perfect score: 21  
 Sequence: 1 LGPA 4

Scoring table: BLOSUM62  
 Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 1100

Minimum DB seq length: 0  
 Maximum DB seq length: 10

Post-processing: Minimum Match 0%  
 Maximum Match 100%  
 Listing first 45 summaries

Database : PIR\_73:\*  
 1: pirl:\*  
 2: pir2:\*  
 3: pir3:\*  
 4: pir4:\*

Pred. No. is the number of results predicted by chance to have a  
 score greater than or equal to the score of the result being printed,  
 and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Query		DB	ID	Description
	Score	Match Length			
1	21	100.0	8 4	I54017	granulocyte-colony
2	19	90.5	10 2	B33710	ornithine decarbox
3	17	81.0	7 2	A33098	244K exoantigen -
4	17	81.0	9 2	S35538	ribosomal protein
5	17	81.0	9 2	A53797	3',5'-cyclic-GMP p
6	17	81.0	10 2	PH1345	Ig heavy chain DJ
7	15	71.4	9 4	I57650	hemoglobin alpha c
8	14	66.7	10 1	ECLQ1M	tachykinin I - mig
9	14	66.7	10 2	S70336	napin small chain
10	13	61.9	4 2	PT0675	T-cell receptor be
11	13	61.9	5 2	PT0267	Ig heavy chain CRD
12	13	61.9	5 2	JT0520	Ig kappa chain V-I
13	13	61.9	5 2	PT0669	T-cell receptor be

14	13	61.9	6	2	A61049	halo-toxin - Pseud
15	13	61.9	7	2	A44428	platelet aggregati
16	13	61.9	7	2	PT0515	T-cell receptor be
17	13	61.9	7	2	B48394	major fat-globule
18	13	61.9	8	2	E47393	neuropeptide calla
19	13	61.9	8	2	PT0368	Ig gamma chain C r
20	13	61.9	8	2	A28719	thymic humoral fac
21	13	61.9	8	2	PT0559	T-cell receptor be
22	13	61.9	9	2	S15850	vitamin D3 26-mono
23	13	61.9	9	2	S70332	endosperm protein,
24	13	61.9	9	2	G56978	collagen alpha 1(I
25	13	61.9	9	2	S26508	collagen alpha 2(V
26	13	61.9	10	1	XASNPC	angiotensin-conver
27	13	61.9	10	2	S65388	cytochrome-c oxida
28	13	61.9	10	2	A46491	C3 homolog HX - in
29	13	61.9	10	2	H28027	protein P11 - curl
30	13	61.9	10	2	S77990	cytochrome-c oxida
31	13	61.9	10	2	S68638	acetylcholinestera
32	13	61.9	10	2	S26506	collagen alpha 1(V
33	13	61.9	10	2	PH0927	T-cell receptor be
34	11	52.4	5	2	B60274	major protein anti
35	11	52.4	6	2	A43766	28K ubiquitin-immu
36	11	52.4	7	2	S71870	glutathione transf
37	11	52.4	7	2	PN0150	omega-gliadine 1'
38	11	52.4	7	2	PQ0727	H2 class I protein
39	11	52.4	7	2	I48086	DNA topoisomerase
40	11	52.4	7	4	A58725	virotoxin - destro
41	11	52.4	8	2	JS0317	leucokinin VII - M
42	11	52.4	8	2	I48935	apolipoprotein A-I
43	11	52.4	9	2	B45796	dihydrolipoamide S
44	11	52.4	9	2	S66607	quinoline 2-oxidor
45	11	52.4	9	2	C41170	photosystem II pro

#### ALIGNMENTS

##### RESULT 1

I54017

granulocyte-colony stimulating factor precursor - synthetic (fragment)

C;Species: synthetic

A;Note: human gene engineered and expressed in Echerichia coli

C;Date: 28-Jan-2000 #sequence\_revision 28-Jan-2000 #text\_change 28-Jan-2000

C;Accession: I54017

R;Devlin, P.E.; Drummond, R.J.; Toy, P.; Mark, D.F.; Watt, K.W.; Devlin, J.J.  
Gene 65, 13-22, 1988

A;Title: Alteration of amino-terminal codons of human granulocyte-colony-  
stimulating factor increases expression levels and allows efficient processing  
by methionine aminopeptidase in Escherichia coli.

A;Reference number: I54017; MUID:88284374; PMID:2456256

A;Accession: I54017

A;Status: translated from GB/EMBL/DDBJ

A;Molecule type: mRNA

A;Residues: 1-8 <DEV>

A;Cross-references: GB:M20922; NID:g806638; PIDN:AAA66353.1; PID:g183043

Query Match 100.0%; Score 21; DB 4; Length 8;



Best Local Similarity 100.0%; Pred. No. 2.8e+05;  
Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LGPA 4  
    ||||  
Db 4 LGPA 7

Search completed: March 18, 2003, 09:35:20  
Job time : 18 secs

GenCore version 5.1.4\_p5\_4578  
 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: March 18, 2003, 09:35:24 ; Search time 12 Seconds  
 (without alignments)  
 15.364 Million cell updates/sec

Title: US-09-520-856A-1  
 Perfect score: 21  
 Sequence: 1 LGPA 4

Scoring table: BLOSUM62  
 Gapop 10.0 , Gapext 0.5

Searched: 199416 seqs, 46092074 residues

Total number of hits satisfying chosen parameters: 27722

Minimum DB seq length: 0  
 Maximum DB seq length: 10

Post-processing: Minimum Match 0%  
 Maximum Match 100%  
 Listing first 45 summaries

Database : Published Applications\_AA:\*  
 1: /cgn2\_6/ptodata/2/pubpaa/US08\_NEW\_PUB.pep:\*  
 2: /cgn2\_6/ptodata/2/pubpaa/PCT\_NEW\_PUB.pep:\*  
 3: /cgn2\_6/ptodata/2/pubpaa/US06\_NEW\_PUB.pep:\*  
 4: /cgn2\_6/ptodata/2/pubpaa/US06\_PUBCOMB.pep:\*  
 5: /cgn2\_6/ptodata/2/pubpaa/US07\_NEW\_PUB.pep:\*  
 6: /cgn2\_6/ptodata/2/pubpaa/US07\_PUBCOMB.pep:\*  
 7: /cgn2\_6/ptodata/2/pubpaa/PCTUS\_PUBCOMB.pep:\*  
 8: /cgn2\_6/ptodata/2/pubpaa/US08\_PUBCOMB.pep:\*  
 9: /cgn2\_6/ptodata/2/pubpaa/US09\_NEW\_PUB.pep:\*  
 10: /cgn2\_6/ptodata/2/pubpaa/US09\_PUBCOMB.pep:\*  
 11: /cgn2\_6/ptodata/2/pubpaa/US10\_NEW\_PUB.pep:\*  
 12: /cgn2\_6/ptodata/2/pubpaa/US10\_PUBCOMB.pep:\*  
 13: /cgn2\_6/ptodata/2/pubpaa/US60\_NEW\_PUB.pep:\*  
 14: /cgn2\_6/ptodata/2/pubpaa/US60\_PUBCOMB.pep:\*

Pred. No. is the number of results predicted by chance to have a  
 score greater than or equal to the score of the result being printed,  
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	%		DB	ID	Description
		Query	Match Length			
1	21	100.0	9	8	US-08-854-825-22	Sequence 22, Appl
2	21	100.0	9	9	US-10-101-487-111	Sequence 111, App
3	21	100.0	10	8	US-08-854-825-21	Sequence 21, Appl

4	21	100.0	10	10	US-09-911-838-196	Sequence 196, App
5	21	100.0	10	10	US-09-911-838-223	Sequence 223, App
6	19	90.5	7	9	US-09-818-991-35	Sequence 35, Appl
7	19	90.5	8	9	US-09-818-991-2	Sequence 2, Appli
8	19	90.5	8	10	US-09-822-250-2	Sequence 2, Appli
9	19	90.5	8	10	US-09-822-250-4	Sequence 4, Appli
10	19	90.5	8	10	US-09-987-456-141	Sequence 141, App
11	19	90.5	8	10	US-09-987-456-143	Sequence 143, App
12	19	90.5	10	10	US-09-767-460-42	Sequence 42, Appl
13	18	85.7	10	9	US-09-758-426-46	Sequence 46, Appl
14	18	85.7	10	9	US-09-758-198-46	Sequence 46, Appl
15	18	85.7	10	9	US-09-861-661-46	Sequence 46, Appl
16	18	85.7	10	10	US-09-758-128-46	Sequence 46, Appl
17	17	81.0	5	9	US-10-113-085-3	Sequence 3, Appli
18	17	81.0	6	9	US-09-727-963A-35	Sequence 35, Appl
19	17	81.0	6	9	US-09-976-736-59	Sequence 59, Appl
20	17	81.0	6	9	US-09-976-736-67	Sequence 67, Appl
21	17	81.0	6	12	US-10-156-820-48	Sequence 48, Appl
22	17	81.0	8	9	US-09-848-967-29	Sequence 29, Appl
23	17	81.0	8	10	US-09-756-283A-48	Sequence 48, Appl
24	17	81.0	8	10	US-09-756-283A-50	Sequence 50, Appl
25	17	81.0	8	10	US-09-756-283A-52	Sequence 52, Appl
26	17	81.0	8	10	US-09-756-283A-53	Sequence 53, Appl
27	17	81.0	9	9	US-09-826-290-98	Sequence 98, Appl
28	17	81.0	9	9	US-09-826-290-342	Sequence 342, App
29	17	81.0	9	9	US-09-826-290-391	Sequence 391, App
30	17	81.0	9	9	US-09-826-290-392	Sequence 392, App
31	17	81.0	9	9	US-09-835-853-9	Sequence 9, Appli
32	17	81.0	9	9	US-09-878-603-16	Sequence 16, Appl
33	17	81.0	9	9	US-09-878-603-30	Sequence 30, Appl
34	17	81.0	9	9	US-09-878-603-31	Sequence 31, Appl
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36	17	81.0	9	9	US-09-878-603-33	Sequence 33, Appl
37	17	81.0	9	9	US-10-012-756-24	Sequence 24, Appl
38	17	81.0	9	9	US-09-922-405B-23	Sequence 23, Appl
39	17	81.0	9	9	US-10-029-301-9	Sequence 9, Appli
40	17	81.0	9	9	US-10-066-474-23	Sequence 23, Appl
41	17	81.0	9	9	US-10-001-546-47	Sequence 47, Appl
42	17	81.0	9	9	US-09-791-389-31	Sequence 31, Appl
43	17	81.0	9	9	US-09-791-393-31	Sequence 31, Appl
44	17	81.0	9	9	US-10-125-635A-41	Sequence 41, Appl
45	17	81.0	9	9	US-10-125-635A-93	Sequence 93, Appl

#### ALIGNMENTS

##### RESULT 1

US-08-854-825-22

; Sequence 22, Application US/08854825

; Patent No. US20020115061A1

; GENERAL INFORMATION:

; APPLICANT: Chisari, Francis V.

; APPLICANT: Cerny, Andreas

; TITLE OF INVENTION: PEPTIDES FOR INDUCING CYTOTOXIC T

; TITLE OF INVENTION: LYMPHOCYTE RESPONSES TO HEPATITIS C VIRUS

; NUMBER OF SEQUENCES: 55

```

;   CORRESPONDENCE ADDRESS:
;   ADDRESSEE:  Leydig, Voit & Mayer
;   STREET:    Two Prudential Plaza, Suite 4900
;   CITY:      Chicago
;   STATE:     IL
;   COUNTRY:   USA
;   ZIP:       60601
;   COMPUTER READABLE FORM:
;   MEDIUM TYPE:  Floppy disk
;   COMPUTER:    IBM PC compatible
;   OPERATING SYSTEM:  PC-DOS/MS-DOS
;   SOFTWARE:    PatentIn Release #1.0, Version #1.25
;   CURRENT APPLICATION DATA:
;   APPLICATION NUMBER:  US/08/854,825
;   FILING DATE:
;   CLASSIFICATION:  435
;   ATTORNEY/AGENT INFORMATION:
;   NAME:        Silvert, Donald J.
;   REGISTRATION NUMBER:  37552
;   REFERENCE/DOCKET NUMBER:  61230
;   TELECOMMUNICATION INFORMATION:
;   TELEPHONE:    (312) 616-5600
;   TELEFAX:      (312) 616-5700
;   TELEX:        25-3533
;   INFORMATION FOR SEQ ID NO:  22:
;   SEQUENCE CHARACTERISTICS:
;   LENGTH:      9 amino acids
;   TYPE:        amino acid
;   STRANDEDNESS:  single
;   TOPOLOGY:    unknown
;   MOLECULE TYPE:  peptide
US-08-854-825-22

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Query Match          100.0%;  Score 21;  DB 8;  Length 9;
Best Local Similarity 100.0%;  Pred. No. 1.8e+05;
Matches      4;  Conservative      0;  Mismatches      0;  Indels      0;  Gaps      0;

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Qy      1 LGPA 4
        ||||
Db      2 LGPA 5

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## RESULT 2

US-10-101-487-111

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; Sequence 111, Application US/10101487
; Patent No. US20020169125A1
; GENERAL INFORMATION:
; APPLICANT:  LEUNG, DAVID W.
; APPLICANT:  BERGMAN, PHILIP A.
; APPLICANT:  LOFQUIST, ALAN
; APPLICANT:  PIETZ, GREGORY E.
; APPLICANT:  TOMPKINS, CHRISTOPHER K.
; APPLICANT:  WAGGONER JR., DAVID W.
; TITLE OF INVENTION:  RECOMBINANT PRODUCTION OF POLYANIONIC POLYMERS AND USES
; TITLE OF INVENTION:  THEREOF
; FILE REFERENCE:  077319/0329
; CURRENT APPLICATION NUMBER:  US/10/101,487

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; CURRENT FILING DATE: 2002-03-20  
; PRIOR APPLICATION NUMBER: 60/277,705  
; PRIOR FILING DATE: 2001-03-21  
; NUMBER OF SEQ ID NOS: 116  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 111  
; LENGTH: 9  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic peptide  
US-10-101-487-111

Query Match 100.0%; Score 21; DB 9; Length 9;  
Best Local Similarity 100.0%; Pred. No. 1.8e+05;  
Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LGPA 4  
    ||||  
Db 4 LGPA 7

Search completed: March 18, 2003, 09:39:19  
Job time : 13 secs

OM protein - protein search, using sw model

Run on: March 18, 2003, 09:33:41 ; Search time 14 Seconds  
 (without alignments)  
 8.407 Million cell updates/sec

Title: US-09-520-856A-1  
 Perfect score: 21  
 Sequence: 1 LGPA 4

Scoring table: BLOSUM62  
 Gapop 10.0 , Gapext 0.5

Searched: 262574 seqs, 29422922 residues

Total number of hits satisfying chosen parameters: 77191

Minimum DB seq length: 0  
 Maximum DB seq length: 10

Post-processing: Minimum Match 0%  
 Maximum Match 100%  
 Listing first 45 summaries

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 3: /cgn2\_6/ptodata/2/iaa/6A\_COMB.pep:\*  
 4: /cgn2\_6/ptodata/2/iaa/6B\_COMB.pep:\*  
 5: /cgn2\_6/ptodata/2/iaa/PCTUS\_COMB.pep:\*  
 6: /cgn2\_6/ptodata/2/iaa/backfiles1.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

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1	21	100.0	4	1	US-08-213-897A-3	Sequence 3, Appli
2	21	100.0	6	1	US-08-213-897A-17	Sequence 17, Appl
3	21	100.0	7	6	5194592-30	Patent No. 5194592
4	21	100.0	7	6	5194592-32	Patent No. 5194592
5	21	100.0	7	6	5194592-34	Patent No. 5194592
6	21	100.0	7	6	5194592-36	Patent No. 5194592
7	21	100.0	9	1	US-08-214-650-22	Sequence 22, Appl
8	21	100.0	10	1	US-08-213-897A-18	Sequence 18, Appl
9	21	100.0	10	1	US-08-214-650-21	Sequence 21, Appl
10	19	90.5	6	3	US-08-513-968-63	Sequence 63, Appl
11	19	90.5	8	5	PCT-US93-11703-73	Sequence 73, Appl

12	18	85.7	4	3	US-09-039-308A-14	Sequence 14, Appl
13	18	85.7	9	2	US-08-340-283-104	Sequence 104, App
14	18	85.7	9	2	US-08-340-283-160	Sequence 160, App
15	18	85.7	9	4	US-08-918-288-78	Sequence 78, Appl
16	18	85.7	9	4	US-09-282-357-78	Sequence 78, Appl
17	18	85.7	10	1	US-08-513-841-8	Sequence 8, Appli
18	18	85.7	10	2	US-08-696-834-9	Sequence 9, Appli
19	18	85.7	10	2	US-08-942-673-8	Sequence 8, Appli
20	18	85.7	10	4	US-09-118-317-8	Sequence 8, Appli
21	17	81.0	4	1	US-08-219-156-5	Sequence 5, Appli
22	17	81.0	4	1	US-08-206-789-2	Sequence 2, Appli
23	17	81.0	4	1	US-08-206-789-5	Sequence 5, Appli
24	17	81.0	4	1	US-08-366-783-8	Sequence 8, Appli
25	17	81.0	4	1	US-08-329-820-77	Sequence 77, Appl
26	17	81.0	4	1	US-08-329-820-83	Sequence 83, Appl
27	17	81.0	4	2	US-08-707-237A-97	Sequence 97, Appl
28	17	81.0	4	2	US-08-846-021A-11	Sequence 11, Appl
29	17	81.0	4	3	US-08-642-246-17	Sequence 17, Appl
30	17	81.0	4	3	US-09-039-308A-8	Sequence 8, Appli
31	17	81.0	4	4	US-09-455-679-44	Sequence 44, Appl
32	17	81.0	4	4	US-09-451-206-17	Sequence 17, Appl
33	17	81.0	4	5	PCT-US96-06229-17	Sequence 17, Appl
34	17	81.0	5	1	US-07-989-962-9	Sequence 9, Appli
35	17	81.0	5	1	US-08-221-582A-4	Sequence 4, Appli
36	17	81.0	5	1	US-08-219-156-1	Sequence 1, Appli
37	17	81.0	5	1	US-08-219-156-2	Sequence 2, Appli
38	17	81.0	5	1	US-08-219-156-4	Sequence 4, Appli
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41	17	81.0	5	1	US-08-219-156-8	Sequence 8, Appli
42	17	81.0	5	1	US-08-213-402-9	Sequence 9, Appli
43	17	81.0	5	1	US-08-213-897A-4	Sequence 4, Appli
44	17	81.0	5	1	US-08-213-897A-15	Sequence 15, Appl
45	17	81.0	5	1	US-08-459-888-9	Sequence 9, Appli

#### ALIGNMENTS

#### RESULT 1

US-08-213-897A-3

; Sequence 3, Application US/08213897A

; Patent No. 5618790

; GENERAL INFORMATION:

; APPLICANT:

; TITLE OF INVENTION: Protease Mediated Drug Delivery System

; NUMBER OF SEQUENCES: 18

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/213,897A

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/593,867

; FILING DATE: 05-OCT-1990

; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/833,183  
; FILING DATE: 10-FEB-1992  
; INFORMATION FOR SEQ ID NO: 3:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 4 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: peptide  
US-08-213-897A-3

Query Match 100.0%; Score 21; DB 1; Length 4;  
Best Local Similarity 100.0%; Pred. No. 2e+05;  
Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LGPA 4  
| | | |  
Db 1 LGPA 4

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Job time : 15 secs



OM protein - protein search, using sw model

Run on: March 18, 2003, 09:33:33 ; Search time 34 Seconds  
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Title: US-09-520-856A-1  
Perfect score: 21  
Sequence: 1 LGPA 4

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Gapop 10.0 , Gapext 0.5

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Post-processing: Minimum Match 0%  
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	% Query		Length	DB	ID	Description
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1	21	100.0		4	18	AAW17689	Substrate #1 for b
2	21	100.0		4	22	AAG62643	Collagenase assay
3	21	100.0		6	13	AAR28737	Angiotensin I conv
4	21	100.0		6	18	AAW42287	Biotinylated inter
5	21	100.0		6	18	AAW17696	Substrate #1 for m
6	21	100.0		6	23	AAM50401	Matrix metalloprot
7	21	100.0		7	9	AAP80963	N-terminal of hG-C
8	21	100.0		7	9	AAP82874	N-terminal of hG-C
9	21	100.0		7	9	AAP82875	N-terminal of hG-C
10	21	100.0		7	9	AAP82876	N-terminal of hG-C
11	21	100.0		7	22	AAM43805	H11 binding site c
12	21	100.0		7	22	AAM43810	H11 binding site c
13	21	100.0		8	22	ABP12619	HIV A02 super moti
14	21	100.0		8	22	ABP12620	HIV A02 super moti
15	21	100.0		8	22	ABP12621	HIV A02 super moti
16	21	100.0		8	22	ABP15556	HIV A24 super moti
17	21	100.0		8	22	ABP20550	HIV A03 motif gag
18	21	100.0		8	22	AAM22272	HIV peptide SEQ ID
19	21	100.0		8	22	AAM22459	HIV peptide SEQ ID
20	21	100.0		8	22	AAB61937	Human hG-CSF pepti
21	21	100.0		9	16	AAR84596	HCV-1 derived pept
22	21	100.0		9	22	ABP12739	HIV A02 super moti
23	21	100.0		9	22	ABP12740	HIV A02 super moti
24	21	100.0		9	22	ABP12742	HIV A02 super moti
25	21	100.0		9	22	ABP17886	HIV B58 super moti
26	21	100.0		9	22	ABP20553	HIV A03 motif gag
27	21	100.0		9	22	ABP20554	HIV A03 motif gag
28	21	100.0		9	22	AAM22392	HIV peptide SEQ ID
29	21	100.0		9	22	AAM22490	HIV peptide SEQ ID
30	21	100.0		9	22	AAM22491	HIV peptide SEQ ID
31	21	100.0		9	22	AAM22492	HIV peptide SEQ ID
32	21	100.0		9	22	AAM23317	HIV peptide SEQ ID
33	21	100.0		9	22	AAG88359	HER2/NEU DR superm
34	21	100.0		9	22	AAG88513	HER2/NEU DR superm
35	21	100.0		9	22	AAG88683	HER2/NEU DR 3a mot
36	21	100.0		9	23	ABG34168	Human leukocyte an
37	21	100.0		9	23	ABG34196	Human leukocyte an
38	21	100.0		9	23	ABG34399	Human leukocyte an
39	21	100.0		9	23	ABG34563	Human leukocyte an
40	21	100.0		9	23	ABG34668	Human leukocyte an
41	21	100.0		9	23	ABG34698	Human leukocyte an
42	21	100.0		9	23	ABG34759	Human leukocyte an
43	21	100.0		10	10	AAP90874	Proposed T cell ep
44	21	100.0		10	12	AAR11569	Native HIV core pr
45	21	100.0		10	16	AAR84595	HCV-1 derived pept

## ALIGNMENTS

AAW17689

ID AAW17689 standard; peptide; 4 AA.

XX

AC AAW17689;

XX

DT 07-JUL-1997 (first entry)

XX

DE Substrate #1 for bacterial collagenase.

XX

KW Enzyme substrate; MMP-1; protease; tissue abnormality; mesoporphyrin IX;

KW malignancy; mammalian matrix metalloproteinase-1; bacterial collagenase;

KW human interstitial collagenase; cathepsin D; plasmin; fungal infection;

KW human collagenase Type IV; mammalian matrix proteinase-2; tissue injury;

KW 72 kd gelatinase; MMP-2; intravascular clotting; bacterial infection;

KW extravascular clotting abnormality; protozoal infection; therapy;

KW parasitic infection.

XX

OS Synthetic.

XX

PN US5618790-A.

XX

PD 08-APR-1997.

XX

PF 05-OCT-1990; 90US-0593867.

XX

PR 16-MAR-1994; 94US-0213897.

PR 05-OCT-1990; 90US-0593867.

PR 10-FEB-1992; 92US-0833183.

XX

PA (TOOH ) UNIV QUEENS KINGSTON.

XX

PI Kennedy JC, Pottier RH, Ringuet M;

XX

DR WPI; 1997-225448/20.

XX

PT Conjugate system for delivering therapeutic or diagnostic agent to

PT tissue abnormality site - useful to treat or detect abnormalities

PT caused by, e.g. malignancy or tissue injuries

XX

PS Claim 5; Column 18; 10pp; English.

XX

CC AAW17687-W17698 represent synthetic substrates for proteases known to be

CC active in and/or immediately adjacent to certain specified cell or

CC tissue abnormalities. This sequence is a substrate for C. histolyticum

CC bacterial collagenase. These sequences can be used in the conjugate

CC system of the invention. The conjugate system is for delivering a

CC therapeutic or diagnostic agent to a tissue abnormality site (TAS) in a

CC patient. The system comprises a lipophilic or amphiphilic agent,

CC covalently linked to a protease sensitive polypeptide (such as this

CC sequence) having an amino acid sequence readily cleavable by a protease

CC active at the TAS, but not at a normal tissue site, and a solubility

CC modifier conjugated to the protease sensitive polypeptide. Peptides

CC sensitive to cleavage by bacterial collagenase, cathepsin D, plasmin,

CC human collagenase Type IV (also known as 72 kd gelatinase, mammalian

CC matrix proteinase-2, or MMP-2), or mesoporphyrin IX, can also be used in

CC the system. The system can be used to treat or detect tissue

CC abnormalities caused by malignancy, tissue injuries, intravascular or

CC extravascular clotting abnormalities or bacterial, fungal, protozoal or  
CC parasitic infections.

XX

SQ Sequence 4 AA;

Query Match 100.0%; Score 21; DB 18; Length 4;  
Best Local Similarity 100.0%; Pred. No. 7.8e+05;  
Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LGPA 4

||||

Db 1 LGPA 4

## RESULT 2

AAG62643

ID AAG62643 standard; peptide; 4 AA.

XX

AC AAG62643;

XX

DT 11-SEP-2001 (first entry)

XX

DE Collagenase assay related furanacryloyl peptide.

XX

KW Antibacterial; antibiotic; peptide deformylase; PDF; drug discovery.

XX

OS Unidentified.

XX

FH Key Location/Qualifiers

FT Modified-site 1

FT /label= OTHER

FT /note= "modified by FA"

XX

PN WO200138561-A1.

XX

PD 31-MAY-2001.

XX

PF 27-NOV-2000; 2000WO-US32346.

XX

PR 29-NOV-1999; 99US-0449419.

XX

PA (QUES-) QUESTCOR PHARM INC.

XX

PI Frechette R, Davis S, Jaeger C, Chong L, Knap A, Witherell G;

PI Moehle C, Gluchowski C;

XX

DR WPI; 2001-457200/49.

XX

PT Use of peptide deformylase inhibitors to treat bacterial infections -

XX

PS Disclosure; Page 15; 77pp; English.

XX

CC The present invention describes a method of screening for test compounds  
CC which selectively inhibit peptide deformylase (PDF) containing the native  
CC iron catalytic metal centre, involving measuring the level of deformylase  
CC activity following incubation of the test compound in an assay. This can  
CC be used in the discovery of novel antibacterial compounds, which are

CC particularly useful against antibiotic-resistant organisms. The present  
CC sequence is a furanacryloyl peptide used in a collagenase assay in the  
CC exemplification of the invention.

XX

SQ Sequence 4 AA;

Query Match 100.0%; Score 21; DB 22; Length 4;  
Best Local Similarity 100.0%; Pred. No. 7.8e+05;  
Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LGPA 4

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Db 1 LGPA 4

Search completed: March 18, 2003, 09:34:18

Job time : 34 secs